

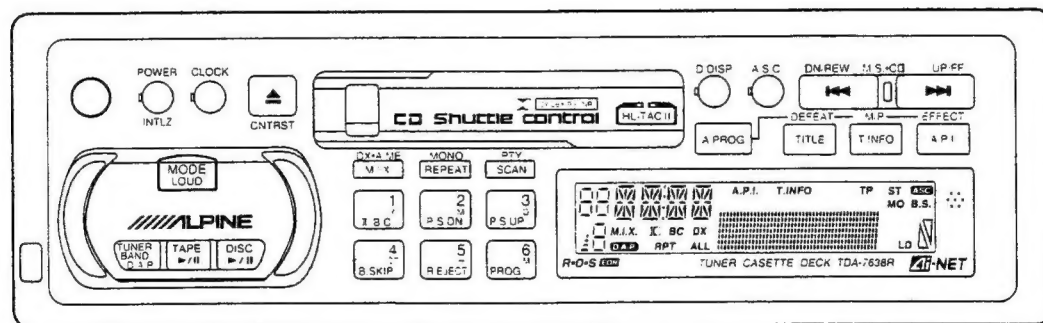
ALPINE[®]

SERVICE MANUAL

FM/MW/LW/RDS Tuner Cassette Deck

CD Shuttle Controller

- For the cassette deck mechanism parts (GR75H13A) of this model, refer to the Service Manual • GR/GR-Y Series (68P20504W07).



4U-NET

TDA-7638R

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Spare Schematic Diagram Inserted.

Specifications

FM RADIO

| | |
|---|----------------------------------|
| Intermediate Frequency | 10.7±0.1MHz |
| Frequency Range | 87.5~108MHz |
| Usable Sensitivity (Mono at 98.1MHz) | 17.2dBf |
| -3dB Limiting Sensitivity (at 98.1MHz) | 19.2dBf |
| S / N Ratio (Stereo 60dBu 98.1MHz) | 56dB |
| Image Rejection (at 106.1MHz) | 40dB |
| IF Rejection (at 90.1MHz) | 60dB |
| Distortion (Input 60dBu at 98.1MHz) | 1% |
| Frequency Response (Ref. 400Hz, at 98.1MHz) | 100Hz : 0±3dB 10kHz : -13±3dB |
| Stereo Separation (at 98.1MHz) | 20dB |
| PS Sensitivity (98.1MHz) | 36.2dBf |
| TP Sensitivity (98.1MHz) | 36.2dBf |

MW RADIO

| | |
|--|---------------------------------------|
| Intermediate Frequency | 450kHz |
| Frequency Range | 531~1,602kHz |
| Usable Sensitivity (20dB S / N, at 999kHz) | 34dB |
| S / N Ratio (at 999kHz) | 44dB |
| Image Rejection (at 1,404kHz) | 50dB |
| IF Rejection (at 603kHz) | 60dB |
| Distortion (at 999kHz) | 1.5% |
| Frequency Response (Ref. 400Hz, at 999kHz) | 100Hz : -3±4dB 4kHz : -12+6, -12dB |

LW RADIO

| | |
|--|---------------------------------------|
| Intermediate Frequency | 450kHz |
| Frequency Range | 153~281kHz |
| Usable Sensitivity (20dB S / N, at 216kHz) | 41dB |
| S / N Ratio (at 216kHz) | 42dB |
| Image Rejection (at 270kHz) | 40dB |
| IF Rejection (at 162kHz) | 50dB |
| Distortion (at 216kHz) | 1.5% |
| Frequency Response (Ref. 400Hz, at 216kHz) | 100Hz : -3±4dB 4kHz : -12+6, -12dB |

TAPE PLAYER

| | |
|--------------------------------------|-------------------------------|
| Wow & Flutter (JIS, WRMS / MTT-111N) | 0.2% |
| Tape Speed (MTT-111N) | 4.76cm / sec. +3 to -1% |
| S / N Ratio (MTT-212N) | Dolby OFF : 52dB |
| Distortion (MTT-118N) | 2% |
| Frequency Range (Ref. 1kHz, MTT-256) | 63Hz : -4dB 12.5kHz : -4dB |
| Separation (MTT-141N) | 35dB |
| Crosstalk (MTT-121N) | 45dB |
| FF & REW Time (C-60) | 115sec |

GENERAL

| | |
|----------------------------|---|
| Power Supply | DC14.4V |
| Output Voltage / Impedance | 1.2V / 10kohm |
| Semiconductors | 41 IC's, 66 Transistors, 26 Diodes, 12 Zener Diodes |
| Dimension (W×H×D) | Chassis : 178×50×143.8 mm Nose : 171×48×22.5 mm |
| Weight | 1.4kg |

Note : Due to Continuing product improvement, specifications and designs are subject to change without notice.

In Case of Difficulty

If you encounter a problem, please review the items in the following checklist. This guide will help you isolate the problem if the unit is at fault. Otherwise, make sure the rest of your system is properly connected or consult your authorized Alpine dealer.

Initial Turn-on After Installation

| Symptom | Cause | Solution |
|-------------------------|----------------------------------|---|
| No function or display. | Car's ignition is off. | If connected following instructions, the unit will not operate with the car's ignition off. |
| | Improper power lead connections. | Check power lead connections. |
| | Blown fuse. | Check the fuses on the battery leads; replace with the proper value if necessary. |

Radio Mode

| | | |
|---|--|--|
| Unable to receive stations. | No antenna or open connection in cable. | Make sure the antenna is properly connected; replace the antenna or cable if necessary. |
| Unable to tune stations in the seek mode. | You are in a weak signal area. | Make sure the tuner is in the DX mode. |
| | If the area you are in is a primary signal area, the antenna may not be grounded and connected properly. | Check your antenna connections; make sure the antenna is properly grounded at its mounting location. |
| Broadcast is noisy. | The antenna may not be the proper length. | Make sure the antenna is fully extended; if broken, replace the antenna with a new one. |
| | The antenna is not the proper length. | Extend the antenna fully; replace it if it is broken. |
| | The antenna is poorly grounded. | Make sure the antenna is grounded properly at its mounting location. |

Tape Mode

| | | |
|---------------------|---|--|
| Output sounds dull. | The tape head needs cleaning. Incorrect Dolby NR in use. | Clean the tape head. Check Dolby NR switch setting. |
|---------------------|---|--|

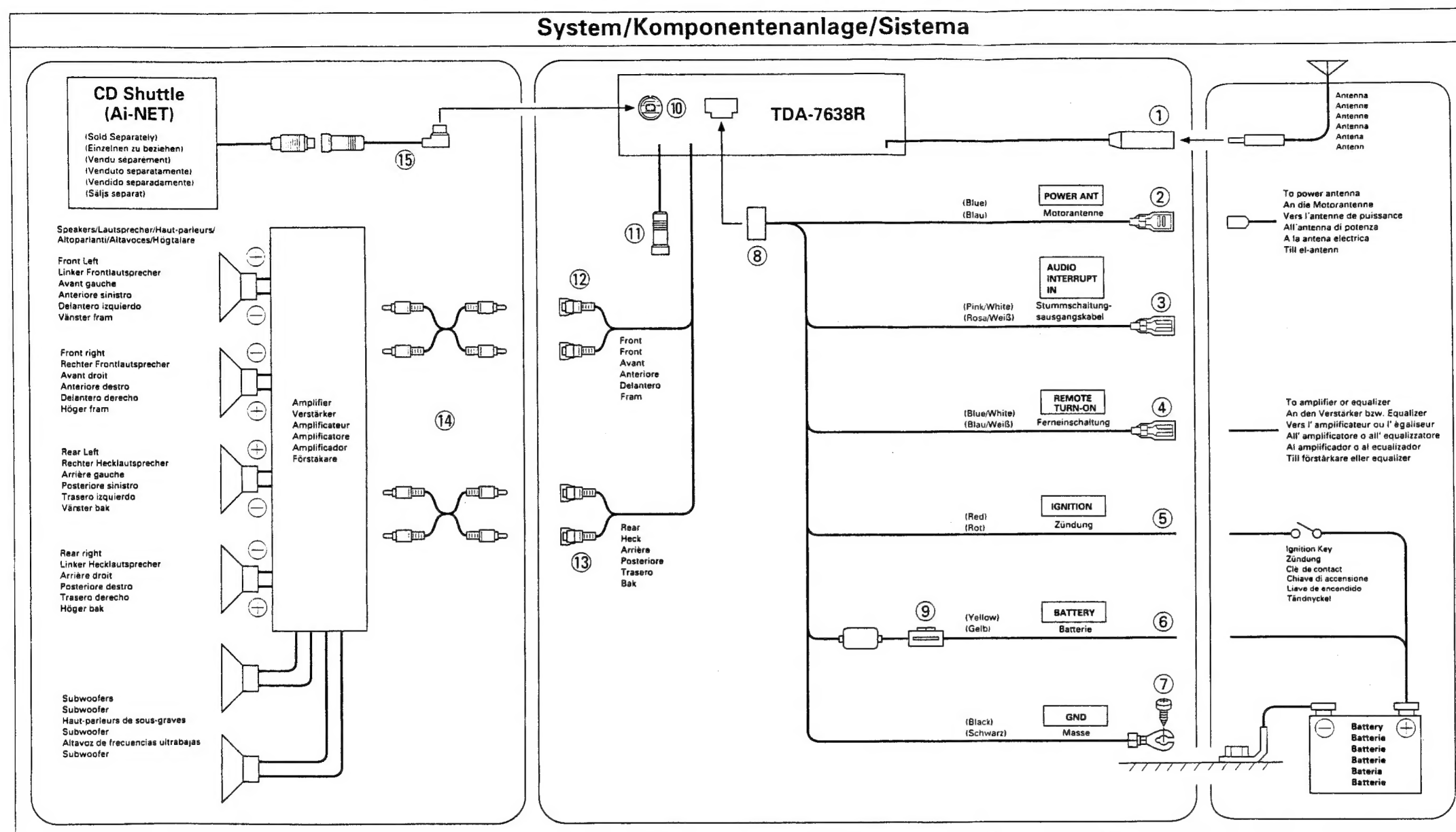
In Case of Difficulty

CD Shuttle Mode

| | | |
|-------------------------------------|--|--|
| CD Shuttle not functioning. | Out of operating temperature range +50°C (+120°F) for CD. | Allow the car's interior (or trunk) temperature to cool. |
| CD playback sound is wavering. | Moisture condensation in the CD Module. | Allow enough time for the condensation to evaporate (about 1 hour). |
| Unable to fast forward or backward. | The CD has been damaged. | Eject the CD and discard it; using a damaged CD in your unit can cause damage to the mechanism. |
| Sound skips due to vibration. | Improper mounting of the CD Shuttle. Disc is very dirty. Disc has scratches. | Securely re-mount the CD Shuttle. Clean the disc. Change the disc. |
| Sound skips without vibration. | Dirty or scratched disc. | Clean the disc; damaged discs should be replaced. |
| Single (8cm) disc does not play. | Single CD adaptor is not used. | Attach a single CD adaptor (recommended by Alpine) to the single disc and insert into the CD magazine. |

Indication for CD Shuttle

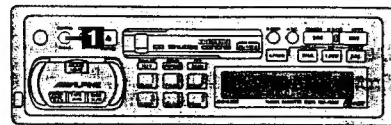
| Indication | Cause | Solution |
|------------|--|--|
| --- H | Protective circuit is activated due to high temperature. | The indicator will disappear when the temperature returns to within operation range. |
| ERROR 01 | Malfunction in the CD Shuttle. | Consult your Alpine dealer. Press the magazine eject button and pull out the magazine. Check the indication. Insert the magazine again. If the magazine cannot be pulled out, consult your Alpine dealer. |
| | Magazine ejection not possible. | Press the magazine eject button. If the magazine does not eject, consult your Alpine dealer. |
| ERROR 02 | A disc is left inside the CD Shuttle. | Press the EJECT button to activate the eject function. When the CD Shuttle finishes the eject function, insert an empty CD magazine into the CD Shuttle to receive the disc left inside the CD Shuttle. |
| NO MAGZN | No magazine is loaded into the CD Shuttle. | Insert a magazine. |
| NO DISC | No indicated disc. | Choose another disc. |



- ① **Antenna Receptacle**
- ② **Power Antenna Lead (Blue)**
When loaded with a power antenna, connect to the +B terminal of the power antenna.
- ③ **Audio Interrupt In Lead (Pink White)**
- ④ **Remote Turn-On Lead (Blue/White)**
Connect this lead to the remote turn-on lead of your amplifier or signal processor.
- ⑤ **Switched Power Lead (Ignition) (Red)**
Connect this lead to an open terminal on the vehicle's fuse box or another unused power source which provides (+) 12V only when the ignition is turned on or in the accessory position.
- ⑥ **Battery Lead (Yellow)**
Connect this lead to the positive (+) post of the vehicle's battery.
- ⑦ **Ground Lead (Black)**
Connect this lead to a good chassis ground on the vehicle. Make sure the connection is made to bare metal and is securely fastened using the sheet metal screw provided.
- ⑧ **Power Supply Connector**
- ⑨ **Fuse Holder (3A)**
- ⑩ **Ai-NET Input Connector**
Connect this to the Ai-NET Output connector on other Ai-NET model.
- ⑪ **Ai-NET Output Connector**
- ⑫ **Front Output RCA Connectors**
RED is right and WHITE is left.
- ⑬ **Rear Output RCA Connectors**
RED is right and WHITE is left.
- ⑭ **RCA Extension Cable (Sold Separately)**
- ⑮ **Ai-NET Cable**

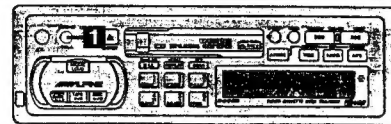
Basic Operation

Initial System Start-Up



- 1 When operating the unit for the first time after installation or after the vehicle's battery has been disconnected and reconnected, set the volume level to its minimum, then press the INTLZ button for at least 3 seconds to reset the unit.

Turning Power On and Off



- 1 **POWER**
Press to turn on the unit. The display shows "POWER" for 2 seconds.
The volume level gradually increases to the same level as you were listening to before the power was turned off.
Note:
The unit can be turned on by pressing any button except the eject and CLOCK buttons, or by inserting a cassette tape.

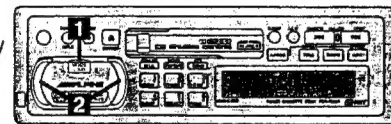
Handling the Detachable Front Panel

Do not expose to rain or water.

Do not drop or apply shock.



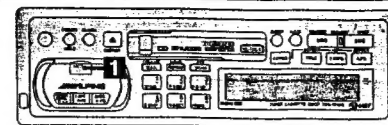
Adjusting Volume/Treble/Bass/Balance/Fader (Front and Rear)



- 1 **TREBLE**
Press repeatedly to choose the desired mode.
Notes:
• If the level control is not rotated in 5 seconds after selecting the TREBLE, BASS, BALANCE and FADER modes, the unit automatically sets in the VOLUME mode.
• Volume level can be adjusted by rotating the level control without first pressing the mode button.
- 2 **+7 TREBLE**
Rotate the level control clockwise or counterclockwise to increase or decrease the level until the desired sound is obtained in each mode.
Note: When this control is rotated to its extreme end, the level changes quickly.
The settings of the Bass and Treble will be individually memorized for each source (FM, MW, LW, tape and CD) until the setting is changed.

Basic Operation

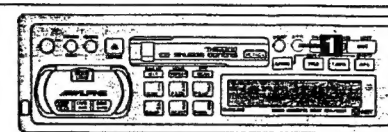
Turning Loudness On/Off



Loudness introduces a special low- and high-frequency emphasis at low listening levels to compensate for the ear's decreased sensitivity to bass and treble sound.

- 1 **LOUD**
Press for at least 2 seconds to activate or deactivate the loudness mode.
Note: When an optional Alpine Audio Processor (Equalizer or Divider) is connected to the TDA-7638R, the Loudness mode is unfunctional.

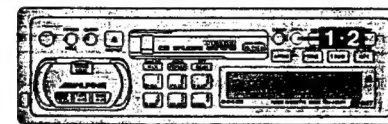
Presetting Ambience Sound Compensator (A.S.C.) Level



The built-in Fuzzy Logic circuit detects the low/mid frequency noise created by the vehicle engine and road surface, then adjusts the volume and bass levels to mask the noise.
Note: When an optional Alpine Audio Processor (Equalizer or Divider) is connected to the TDA-7638R, the A.S.C. mode is unfunctional.

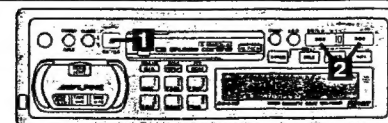
- 1 **A.S.C.**
Press for at least 2 seconds to activate the A.S.C. level selecting mode. The display blinks for 2 seconds. Press repeatedly to choose the desired A.S.C. level. The unit automatically stores the selected level in memory and the A.S.C. level indicator disappears.

Turning A.S.C. On or Off



- 1 **A.S.C.**
Press momentarily to activate the A.S.C. mode. The A.S.C. indicator illuminates for 2 seconds.
- 2 **ASC OFF**
To deactivate the A.S.C. mode, press again. The ASC OFF indicator appears for 2 seconds.

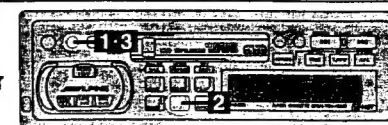
Adjusting Dot-Matrix Display Contrast



- 1 **CONTRAST**
Press for at least 3 seconds to activate the contrast adjusting mode. The display shows "CONTRAST" for 5 seconds.
- 2 **CONTRAST**
Press the \leftarrow or \rightarrow button repeatedly to select the desired contrast level of the display while "CONTRAST" is displayed. The selected contrast level is automatically set after 5 seconds.

Basic Operation

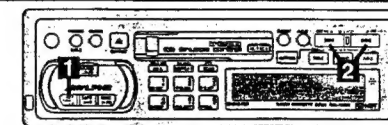
Changing Lighting Colour



- 1 **POWER**
Press the POWER button for at least 3 seconds.
- 2 **GREEN**
AMBER
Press the Preset 5 button to change the lighting colour between green and amber.
- 3 **POWER**
Press the POWER button to set the lighting colour.

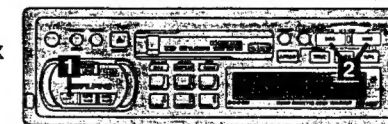
Radio Operation

Manual Tuning



- 1 **F1**
F2
MW
LW
Press repeatedly until the desired radio band is displayed.
- 2 **F1 90.10**
Press the DN or UP button to move downward or upward one step respectively until the desired station frequency is displayed.

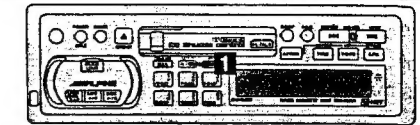
Automatic Seek Tuning



- 1 **F1**
F2
MW
LW
Press repeatedly until the desired radio band is displayed.
- 2 **F1 90.10**
Press and hold down the DN button or UP button for at least 0.5 seconds to automatically seek a station downward or upward respectively. When the unit finds a station, it automatically stops at that station. To automatically seek and tune to the next station, press the button again for at least 0.5 seconds.

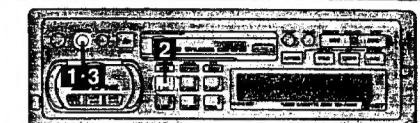
Radio Operation

Mono/Stereo Switching



- 1 **"ST" indicator appears when a stereo station is tuned in.**
F1 101.50 ST
F1 101.50 MO
Press to switch from the stereo mode to the monaural mode to reduce the noise level of noisy stereo broadcast due to weak signal. In the monaural mode, the MO indicator appears. Press again to return to the stereo mode.

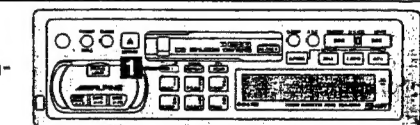
Adjusting FM Signal Level



If the difference in volume levels between the FM station and the tape player is great, you can adjust the FM signal level to make the difference smaller.

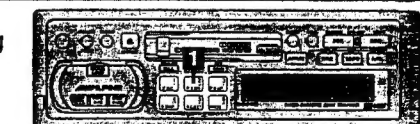
- 1 **POWER**
Press the POWER button for at least 3 seconds.
- 2 **FM-LV HI**
FM-LV Lo
Press to select the desired signal level.
- 3 **POWER**
Press to preset the FM signal level in memory and deactivate the adjusting mode.

Radio Station Auto-Seek Sensitivity



- 1 **DX**
Press the DX-A.M.E. button to illuminate the DX indicator in the display. With the DX mode activated, both strong and weak stations will be tuned in the Auto-Seek operation.

Manual Storing of Station Presets

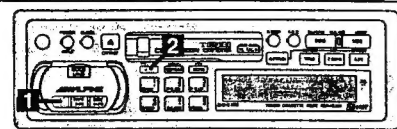


- 1 **1**
1. Tune in the desired radio station you wish to store in the preset memory.
2. Press any one of the preset buttons (1 through 6) for at least 2 seconds until the frequency display blinks.
3. Press the preset button into which you wish to store the station while the display is blinking (within 5 seconds). The display changes from blinking to steady lighting indicating that the station has been memorized. The preset number is also displayed.
4. Repeat the procedure to store 5 other stations onto the same band. Use this procedure for other bands.

A total of 30 stations can be stored in the preset memory (6 stations for each band; FM1, FM2, MW, LW and D.A.P.). The RDS stations can be preset in the FM1, FM2 and D.A.P. bands only.
Note: If a preset memory has already been set in the same preset location, it will be cleared and the new station will be memorized.

Radio Operation

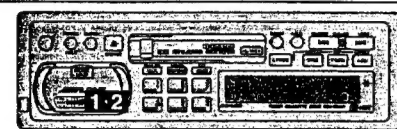
Automatic Memory of Station Presets



- 1 Press until the desired radio band is displayed.
- 2 Press for at least 2 seconds. The display shows "A.MEMORY" for a second then changes the radio frequency during the auto memory operation. The tuner will automatically seek and store 6 strong stations in the selected band in order of signal strength. When the automatic storing has been completed, the tuner goes to the station stored in the preset location No. 1.

Note: If no stations are stored, the tuner will return to the original station you were listening to before the auto storing procedure began.

Storing into Direct Access Preset (D.A.P.) Band

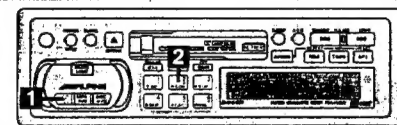


A combination of radio stations in any bands (up to 6 stations) can be manually preset onto the D.A.P. band.

- 1 Press the BAND button to select the desired band: FM, MW or LW. The display shows the selected band. To memorize stations onto the D.A.P. band, follow the steps for the Automatic or Manual Storing of Station Presets section above.
- 2 Press for at least 2 seconds until the D.A.P. indicator appears.

- 2 Press for at least 2 seconds until the D.A.P. indicator disappears to cancel the D.A.P. mode.

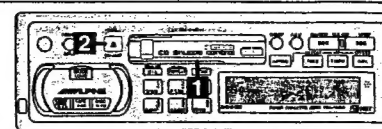
Tuning to Preset Stations



- 1 Press repeatedly until the desired band is displayed.
- 2 Press the station preset button that has your desired radio station in memory. The display shows the preset number, band and frequency of the station.

Cassette Player Operation

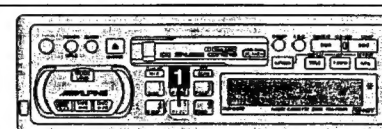
Inserting/Ejecting Cassette Tape



- 1 Insert a cassette tape into the slot with the open side facing right. When the cassette is loaded, the player automatically starts tape playback and indicates "TAPE" in the display.
- 2 Press when you want to eject the cassette tape.

Note: When power is turned off or the front panel is removed, the full-logic mechanism will automatically switch to the PAUSE mode. This protects the tape from being deformed by the pinch-rollers if left long periods.

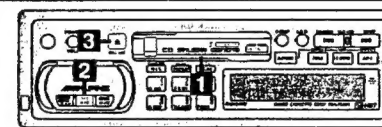
Return Eject



- 1 Press during tape play to play both sides of the tape, then eject the tape.

Note: Auto Metal
When a metal cassette tape is inserted, the player automatically adjusts to the equalization for metal or any other high bias tape for optimum sound.

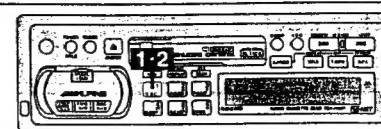
Normal Play and Pause



- 1 Insert a cassette (or press the TAPE button to switch from the tuner or CD shuttle mode if a cassette is already inside the tape player). The player begins playback. The display shows "TAPE" and "L" or "R" depending on the tape side being played.
- 2 Press to pause tape play. The display shows 2 tape-side indicators. Press again to resume playback. The display shows "L" or "R" depending on the tape side being played.
- 3 Press to stop the tape play and eject the cassette. The tape-direction indicator disappears.

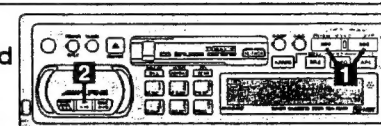
Cassette Player Operation

Dolby B/C NR (Noise Reduction)



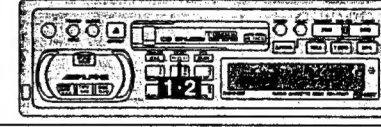
- 1 Press the Dolby NR (NR) button in the tape mode to select the Dolby B NR or C NR to play a Dolby B NR or C NR encoded tape respectively. The NR B or NR C indicator appears to show your selection and the noise level becomes low.
- 2 Press until the NR B and NR C indicators disappear to deactivate the Dolby NR mode.

Fast Forward and Rewind



- 1 Press the REW or FF button during tape play to fast rewind or forward the tape respectively. The tape side indicator (L or R) blinks. When the end of the tape is reached in the rewind mode, the player stops automatically and begins playing from the beginning of the same side. When the end of the tape is reached in the fast forward mode, the player stops automatically and begins playing from the beginning of the opposite side.
- 2 Press to stop fast rewinding or forwarding to resume tape play. The tape side indicator changes to steady lighting.

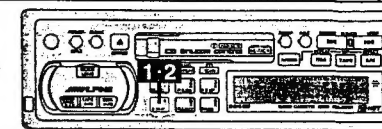
Repeat Play



- 1 Press to play back repeatedly the current programme being played. The RPT indicator appears and the programme will be played repeatedly.
- 2 Press to stop the repeat play. The RPT indicator disappears.

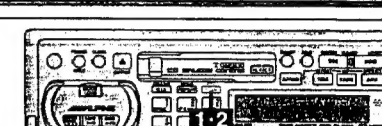
Cassette Player Operation

Blank Skip (B.S.)



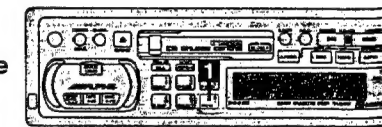
- 1 Press during tape play to skip over blank portions of the tape lasting 15 seconds or longer. "B.S." appears on the display.
- 2 Press to cancel the blank skip mode. "B.S." disappears from the display.

Scanning Programmes



- 1 Press to play the first 10 seconds of each programme on the tape. The display blinks during scanning operation.
- 2 Press to cancel the scanning when the desired programme is found.

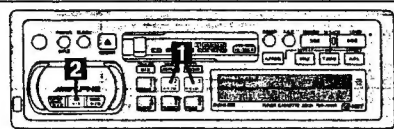
Manual Reverse



- 1 Press during tape play to change the tape direction to play the other side of the tape. The tape side indicators (L and R) change to show which side of the cassette is being played.

Cassette Player Operation

Programme Sensor (P.S.)

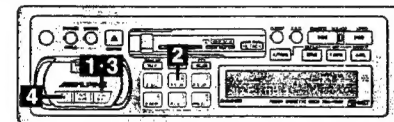


- Press the P.S. DN button once to return to the beginning of the current selection being played. If you wish to return to a selection further back, press repeatedly until the number of selections you would like to skip is shown in the display. The display will show P.S. -1 with the first press and will increase by one with each successive press up to P.S. -9. The tape indicator will blink showing the direction of your search. The tape direction indicator blinks during searching operation.
- Press the P.S. UP button once to advance to the beginning of the next selection. If you wish to advance to a selection further ahead, press repeatedly until the number of selections you would like to skip is shown in the display. The display will show P.S. +1 with the first press and will increase by one with each successive press up to P.S. +9. The tape indicator will blink showing the direction of your search.

- To stop the programme searching, press the TAPE P/B button.
- Notes:
- The programme sensor feature is functional in the tape play mode only.
 - You can advance to the 9th (max.) programme or return to the 8th (max.) programme.

CD Shuttle Operation

Controlling CD Shuttle (Optional)



If an optional Alpine 6-disc CD Shuttle is connected to the AI-NET connector of the TDA-7638R through an AI-NET adaptor, you can control the CD Shuttle using the TDA-7638R. You can connect and operate multiple Alpine CD Shuttles when these are connected through the Multi-Changer Switching device(s) (KCA-400C) to the TDA-7638R. See the Multi-Changer Selection section on next page for selecting the CD Shuttles.

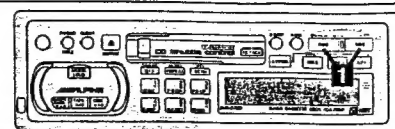
Note: The controls on the TDA-7638R for the CD operation are operative only when the CD Shuttle is interconnected with the TDA-7638R.

- The display example shows when playing the Track 1 on the Disc 3.
- Press the buttons to select the desired disc loaded in the CD Shuttle. The CD Shuttle begins playing from the first track on the selected disc.

- Press to pause CD play. The display shows "PAUSE". To resume CD play, press again. The PAUSE indicator disappears.
- Press the TUNER or TAPE button to deactivate the CD shuttle mode and activate the tuner or tape mode.

CD Shuttle Operation

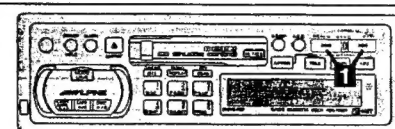
Music Sensor (M.S.) Skip



- Momentarily press the DN button once to return to the beginning of the current track. If you wish to return to the beginning of a track further back, repeatedly press until you reach the desired track. (The display example shows when you are playing the track No. 4.)
- Press the UP button once to advance to the beginning of the next track. If you wish to advance to a track further ahead, press repeatedly until the desired track is reached.

Note: The music sensor feature is functional in the play or pause mode.

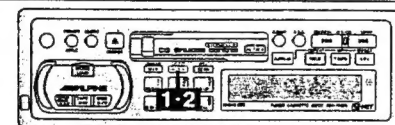
Fast Forward and Backward



- Press and hold the DN or UP button to quickly move backward or forward respectively until you reach the desired portion.

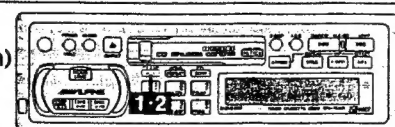
Note: This feature works only in the CD playback mode.

Repeat Play on Single Track or Entire Disc



- Press to display "RPT" or "RPT ALL" to play back repeatedly the current track being played or the entire disc selected.
- Press until the RPT and RPT ALL indicators disappear from the display to deactivate the repeat play.

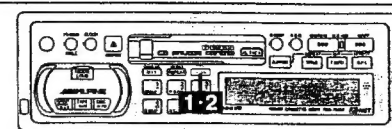
M.I.X. (Random) Play



- Press during CD play or in the pause mode until the M.I.X. indicator appears. The display shows the disc number, elapsed time, "M.I.X." and track number being played. The tracks on the disc will be played back in a random sequence. After all the tracks on the disc have been played back, the player loads the next disc and begins a random sequence play on the next disc.
- Press the button again until the M.I.X. indicator disappears to cancel the M.I.X. play.

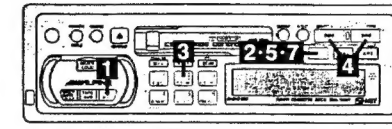
CD Shuttle Operation

Disc Scan



- Press to play the first 10 seconds of each track on the disc. The display shows the disc number, elapsed time, "SCAN", and track number being played during scan play.
- Press to cancel scan play. The display shows the disc, elapsed time and track number being played.

Titling Disc



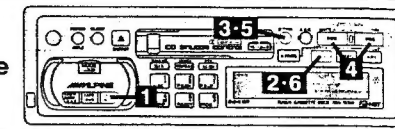
- Press to activate the CD mode.
- Press for at least 2 seconds to select the disc titling mode. "D. TITLE" blinks.
- Press to select the desired disc to be titled. The first digit blinks.
- Press repeatedly to select the desired letter/numeral/symbol available for naming ("A" for example).
- Press to store the first digit in memory and go to the second digit. The first digit changes from blinking to steady lighting and the second digit starts blinking.
- Repeat the steps 4 and 5 above to complete the titling. You can use up to 8 digits for the disc title.
- Press for at least 2 seconds to deactivate the titling mode.

Notes:

- When the memory capacity for the disc titles is used up, the display shows "FULL DATA" to indicate that no more title can be memorized. Refer to the Owner's Manual of the CD Shuttle interconnected for information about how many discs you can title.
- The CD titles stored in memory will be erased when the AI-NET cable to the CD Shuttle is disconnected.

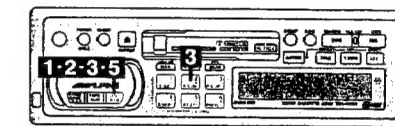
CD Shuttle Operation

Erasing Disc Title



- Press to activate the CD mode.
- Press for at least 2 seconds until the D. TITLE indicator blinks.
- Press to activate the title erasing mode. The display shows a disc title, for example, "MADONNA".
- Press repeatedly until the disc title you want to erase, for example "MICHAEL", is displayed.
- Press to erase the disc title displayed.
- Press for at least 2 seconds to cancel the disc title erasing mode. The display shows the next disc title in memory.

Multi-Changer Selection



You can connect and operate 2 or more (maximum 6) Alpine CD Shuttles with the AI-NET function when these are connected through the Multi-Changer Switching device (KCA-400C) to the TDA-7638R. If you use 1 Switching device, you can connect up to 4 CD player/Shuttles. If you use 2 Switching devices, you can connect up to 6 CD player/Shuttles.

- Press the DISC button on the TDA-7638R to activate the CD mode.
- Press the AUDIO SEL button on the Remote Controller (1101) to activate the CD mode. Proceed to Step 3 below to select the desired player/changer.

CD Shuttle Operation

3 Press the DISC button on the TDA-7638R to select the 3-CD changer or press the Preset buttons (1 through 6) to select the desired CD changer within 5 seconds after activating the CD Shuttle Selection mode in Step 2 above. The display shows the selected player/changer number.

Note: If the selected player/changer is not being connected, the display shows "NO CHGR-X."

4 To operate the selected player/changer, see pages 20 through 27.

5 Press the DISC button on the TDA-7638R for at least 3 seconds to deactivate the CD Shuttle Selection mode.

Press the BAND/PROG button on the Remote Controller (1101) until the desired player/changer indicator appears on the display.

Press the AUDIO SEL button on the Remote Controller to select other audio sources.

Audio Processor Operation

Activating Equalizer/Divider (optional)

If an optional Alpine Equalizer (such as ERA-G100) or Divider (such as PRA-H400) is AI-NET connected to the TDA-7638R, you can operate the Equalizer or Divider from the TDA-7638R and Remote controller 1101.

1 Press repeatedly to activate the desired equalizer mode or the Divider mode. In the A. SOURCE mode, the Equalizer/Divider mode is deactivated and other audio source is activated. Refer to the Owner's Manual for the ERA-G100 or PRA-H400 for operations.

2 Press to deactivate the equalizer or divider mode.

Notes:

- The A. PROC (Audio Processor), DEFEAT, M/P (Maker's/Private), EFFECT and ENT (Enter) buttons are operable only when an optional audio processor is AI-NET connected with the TDA-7638R.
- When an external audio processor is connected to the TDA-7638R and activated, the TDA-7638R's tone circuit will be automatically bypassed.

Clock Operation

Displaying Time/Date

1 Press repeatedly to display the time or year/month/date. The unit can display the RDS time or normal clock time.

Note: When the tuner, tape or CD is operated while the display is showing the time/date, the display shows their functions for 5 seconds and returns to show the time/date. The display shows the time/date even if the power to the unit is turned off as long as the ignition key is on.

2 Press to turn off the time or date and to show other functions.

Setting Time

1 Press for at least 3 seconds until the time indication blinks.

2 Press while the time indication is blinking to select the normal clock time.

3 Press the "H" button to adjust the hours while the time indication is blinking.

4 Press the "M" button to adjust the minutes while the time indication is blinking. The time is automatically set and the time indication changes from blinking to steady lighting 5 seconds after adjusting the minutes.

Setting Date

1 Press repeatedly until the year/month/date is displayed.

2 Press for at least 3 seconds until the year/month/date blinks for 5 seconds.

3 Press while the display is blinking to adjust the year.

4 Press while the display is blinking to adjust the month.

5 Press while the display is blinking to adjust the date. The year/month/date will be automatically set after 5 seconds and the display will be changed to steady illumination.

Message Display

Displaying Alpine Message

1 Press for at least 2 seconds to display the Alpine message stored in memory at the factory. The message scrolls on the display.

2 To cancel the message display, press any button except the D.DISP and TITLE buttons on the main unit.

Displaying Personal Message

1 Press for at least 2 seconds to activate the message display mode.

2 Press to switch between the personal and Alpine messages.

Note: If the personal message is not memorized yet, only the Alpine message will be displayed. See next page for preparing a personal message.

3 To cancel the personal message display, press any button except the D.DISP and TITLE buttons.

Preparing Personal Message

1 Press to activate the message display mode.

2 Press for at least 2 seconds until the first digit blinks.

Note: If there is a message already memorized, the first letter of that message will blink.

3 Press repeatedly to select the desired character (alphabet, numeral or symbol available for the display message), "Y" for example.

4 Press for less than 1.5 seconds. The first digit changes from blinking to steady lighting and the second digit starts to blink.

5 Repeat the steps 3 and 4 above to complete your message. You can use up to 200 characters for your message.

6 Press to deactivate the message display mode.

Press for at least 2 seconds to finish entering your message. The display shows your message.

Remote Control

DN/REW-UP/FF buttons
Radio mode: Press to seek downward or upward for a station.
Tape mode: Press to fast rewind or forward the tape.
CD Shuttle mode: Press to return to the beginning of the current track or advance to the beginning of the next track.

Up ▲/Down ▼ Buttons
Radio mode: Press the ▲ or ▼ button to select the preset station location number upward or downward.
Tape mode: Press the ▲ or ▼ button once to skip forward or backward to the beginning of the next selection or current selection. To skip to a selection further ahead or back, press the ▲ or ▼ button repeatedly until you reach your desired selection.
CD Shuttle mode: Press the ▲ or ▼ button to select the desired disc upward or downward.

ENT (Enter) Button
Press to activate the adjustment mode on an external divider.

Audio/Visual Control
Place this switch in the "A" position for audio operations. Place in the "V" position when you operate an external Display Processor.

Power Button
Press to turn on or off the power to the unit.

DEFEAT Button
Press in the G-EQ or SURROUND mode to defeat the mode (External equalizer).

A.PROC Button
Press to activate an external audioprocessor.

Band/Programme Button
• Press in the radio mode to select the desired band.
• Press in the tape play mode to change the tape side.
• Press in the CD mode to select the desired CD player when 2 or more CD players are connected.

Visual Selector
Press to change the display mode of the optional video monitor.

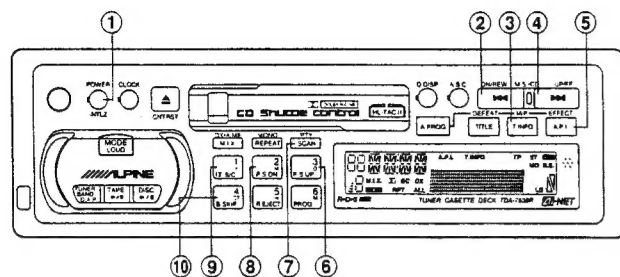
Audio Selector
Press to change the mode between radio, tape and CD.

Volume Control
Press the v or ^ button to decrease or increase the volume level.

Mute Button
Press to instantly decrease the volume level by 20 dB.

Note: Point the remote control toward the remote sensor on the upper left side of the main unit to operate the unit.

RDS



Recalling Preset RDS Stations

For presetting the RDS stations, refer to the Radio Operation section on the Owner's Manual. The RDS stations can be preset in the F1, F2 and D.A.P bands only.

- Press to activate the RDS mode.
- Press the preset location button in which your desired RDS station is preset. If the preset station's signal is weak, the unit automatically searches and tunes to a stronger station in the AF (Alternative Frequencies) list.
- If the preset station and the stations in the AF list cannot be received:

Press the same preset location button again to search again for a station in the PI (Programme Identification) list.

If there are still no stations receivable in the area, the unit displays the frequency of the preset station and the preset indicator disappears.

Setting RDS Reception Mode and Receiving

- Press for at least 3 seconds.
- Press repeatedly to select the desired A.P.I. (Automatic Programme Identification) or PS (Programme Service Name) mode.

Note: Use the A.P.I. 2 mode only when errors occur in the A.P.I. 1 mode because too many FM stations are present. In the A.P.I. 2 mode, it requires about 1 second for tuning. Use the PS ONLY mode when automatic retuning is not required.
- Press to activate the selected mode.
- Press to activate the RDS mode.
- Press the B.S.KIP or P.S.DN button to tune in the desired RDS station.

When the station signal being received has become weak:

A. In the A.P.I. 1 or A.P.I. 2 mode the unit automatically re-tunes to a stronger station that carries the same programme.

B. In the PS ONLY/A.P.I. 1/A.P.I. 2 mode
- Press for more than 2 seconds to have the unit automatically search for a stronger station in the AF (Alternative Frequencies) list. If there is no AF station, the display shows "SEEK END."

Press again to deactivate the RDS mode.

Note: You can tune in an RDS station while you are listening to cassette play. Choose your desired station in 5 seconds after the step 4 above.

Receiving RDS Regional (Local) Stations

- Press for at least 3 seconds.
- Press to turn on or off the REG mode.

In the REG ON mode, the unit automatically keeps receiving the related local RDS station.
- Press to activate the selected mode.
- Press to activate the RDS mode.
- Press to tune in the desired local (regional) RDS station.

Presetting Volume Level for Traffic Information

- Press for at least 3 seconds.
- Press until the desired volume level is obtained.
- Press again to preset the volume level for the traffic information listening.

Receiving Traffic Information

- Press to display the T.INFO indicator.
- Press the B.S.KIP or P.S.DN button to select your desired traffic information station. When a traffic information station is tuned in, the TP indicator lights up.

Traffic information is heard only when it is being broadcast. If traffic information is not being broadcast, the unit is set in the standby mode. When a traffic information broadcast begins, the unit automatically receives it and the display shows "TRF. INFO."

When traffic information broadcast is over, the unit will automatically set in the standby mode.

Note: If the traffic information broadcast signal falls below a certain level, the unit remains in the receiving mode for 1 minute. If the signal remains below a certain level for over 1 minute, the unit is set in the standby mode for the traffic information broadcast.

 - When a traffic information broadcast starts, the unit automatically places the cassette player in the pause mode or stops receiving the regular FM signal. The volume level rises to the preset level if you were listening to cassette or FM at a low level.
 - When the traffic information broadcast finishes, the unit automatically returns to the original source play before the traffic information broadcast began.
 - When traffic information stations cannot be received:
 - In the tuner mode: When the TP signal can no longer be received, an alarm will be sounded after 1 minute.
 - In the tape or EXT mode: When the TP signal can no longer be received, the traffic information station of another frequency will be selected automatically.

Note: The receiver is equipped with the EON (Enhanced Other Networks) function in order to keep track of additional alternative frequencies to the AF list. If the station being received does not broadcast the traffic information, the receiver automatically tunes in the related station that broadcasts the traffic information when it occurs.

PTY Tuning

- Press to activate the PTY mode.

The PTY (Programme Type) of the station being currently received will be displayed for 5 seconds. Press again to start to receive the PTY broadcast while the PTY station is being displayed.

If there is no receivable PTY broadcast, "NONE" will be displayed for 5 seconds.
- Press within 5 seconds after activating the PTY mode to choose the desired programme type while the PTY programme type is being displayed.

The tuner starts searching for a station in the chosen programme type after 3 seconds. The chosen programme type indicator blinks during searching and lights when a station is found.

If no station is found, "NO PTY" will be displayed for 5 seconds.
- Press for at least 2 seconds to cancel the PTY mode.

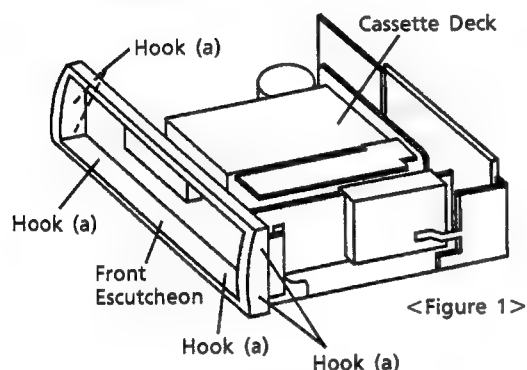
Disassembly Instructions

1. Removal of Nose Unit

- (1) Refer to the Owner's Manual (Part No. 68P50390W83).

2. Removal of Front Escutcheon

- (1) After removal of Top Cover, remove the Hooks (a) as shown in Figure 1.

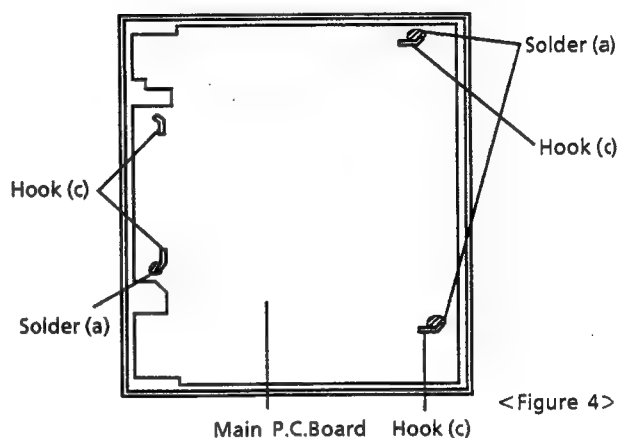
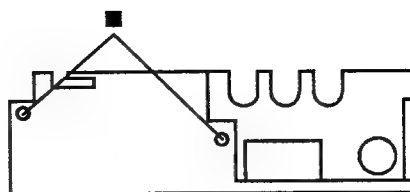
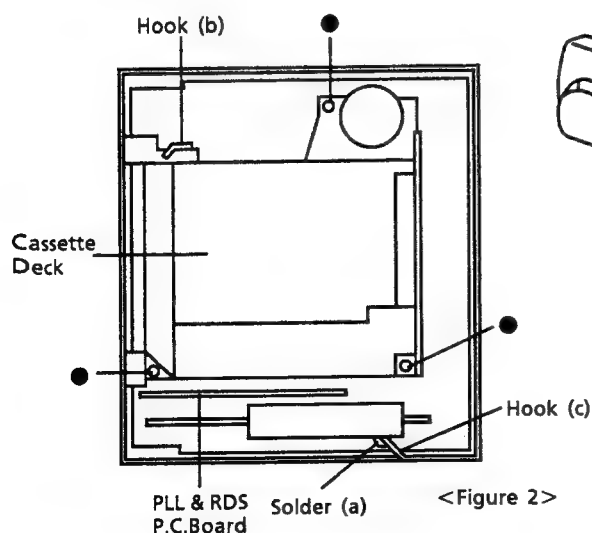


3. Removal of Cassette Deck

- (1) Remove the Hook (b) as shown in Figure 2.
- (2) Remove three screws marked "●" as shown in Figure 2.
- (3) Disconnect one Connector from the Cassette Deck.

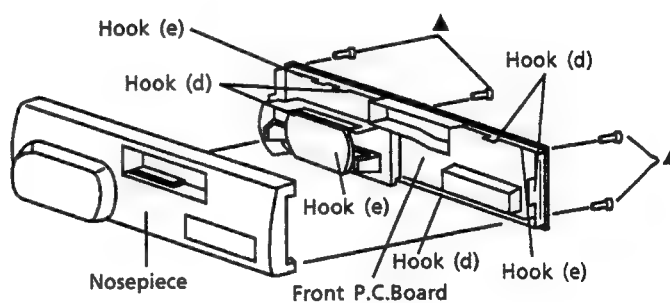
4. Removal of Main P.C.Board

- (1) Remove the Solder (a) and Hooks (c) as shown in Figure 2, 4.
- (2) Remove two screws marked "■" as shown in Figure 3.
- (3) Disconnect two connectors from the Main P.C.Board.



5. Removal of Front P.C.Board

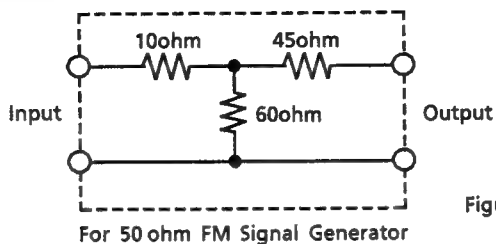
- (1) After removal of Nose Unit, remove four screws marked "▲" and the Hooks (d) as shown in Figure 4.
- (2) Remove the Hooks (e) as shown in Figure 5.



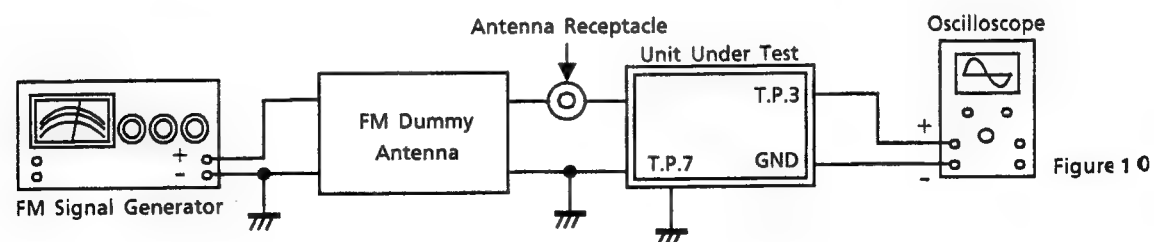
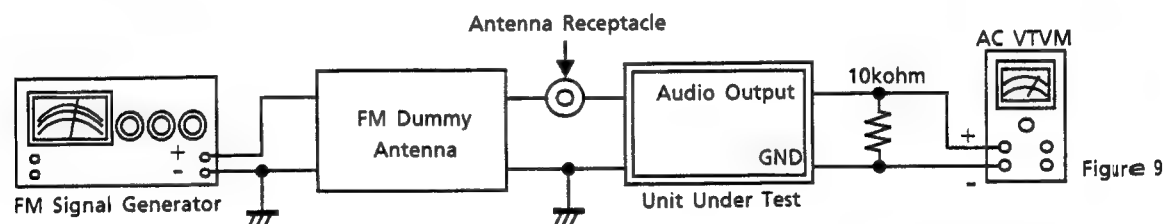
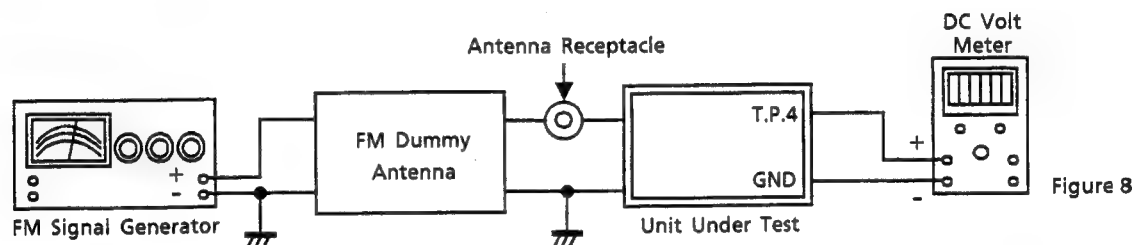
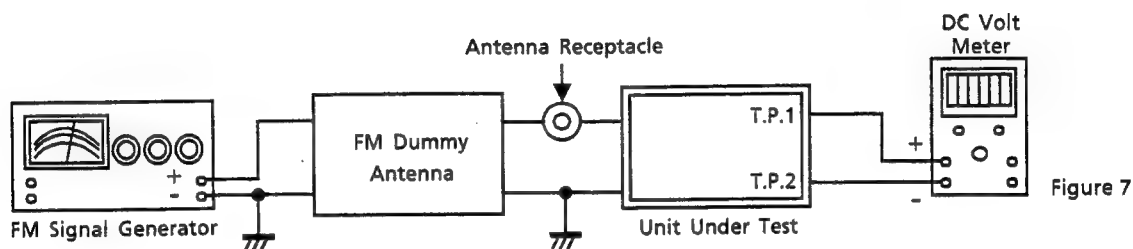
Adjustment Procedures

1. FM SECTION

(1) Dummy Antenna Circuit



(2) Connections



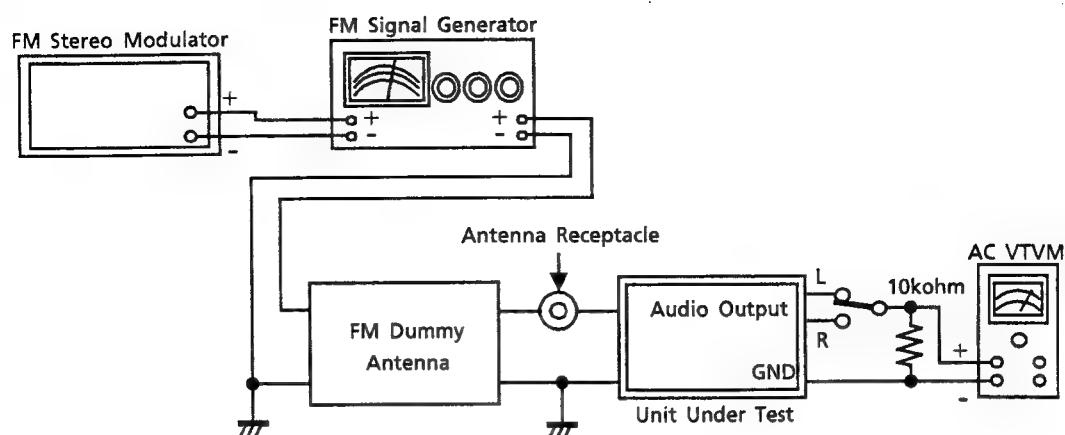
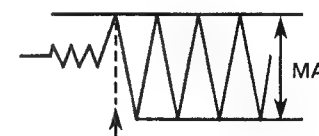


Figure 11

(3) Control Settings

| | |
|-----------------------|-----------------|
| Power Switch | ON |
| Fader Control | Center Position |
| Balance Control | Center Position |
| Treble / Bass Control | Center Position |
| Band Switch | FM |
| Others | OFF |

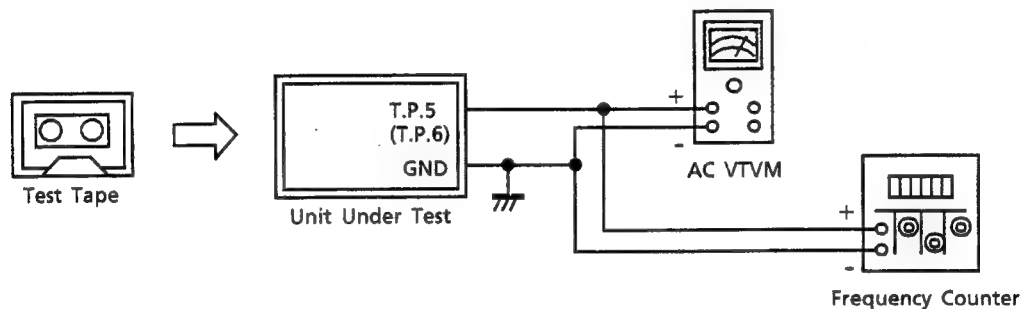
(4) Adjustment Procedures

| Step | Description | Connection | Signal Generator | Dial Control | Test Point | Adjustment |
|------|------------------------------------|--------------|---|--------------|----------------|---|
| 1 | IF Adjustment | Figure 7 | 98.1MHz, 72dB (Mod. OFF) | 98.1MHz | T.P.1 T.P.2 | Adjust L2101 for $0 \pm 15\text{mV}$. |
| 2 | Signal Meter Adjustment | Figure 8 | 98.1MHz, 46dB (Mod. 400Hz) | 98.1MHz | T.P.4 | Adjust VR2101 to $3 \pm 0.1\text{V}$. |
| 3 | Noise Level Adjustment | (1) Figure 9 | 98.1MHz, 72dB (Mod. 400Hz) | 98.1MHz | Audio Output | Adjust VR401 (VOLUME) to obtain 500mV output. This value is 0dB. |
| | | (2) Figure 9 | 98.1MHz, -19dB (Mod. 400Hz) | 98.1MHz | Audio Output | Adjust VR2106 to $-30 \pm 5\text{dB}$ output at SG level minimum. |
| 4 | Seek Stop Adjustment | Figure 10 | 98.1MHz, 26dB (Mod. OFF) | 98.1MHz | T.P.3 | Adjust VR2105 for the waveform changing to maximum output. Figure : Waveform of T.P.3 output.  Stop the adjust VR2105 at this time. |
| 5 | Stereo Separation Adjustment (Lch) | Figure 11 | 98.1MHz, 72dB (Stereo 1kHz, Lch, only) | 98.1MHz | Audio Output | Adjust VR2104 for Rch output to be minimum, and confirm Lch and Rch output level difference is more than 20dB. |

| Step | Description | Connection | Signal Generator | Dial Control | Test Point | Adjustment |
|------|------------------------------------|------------|--|--------------|--------------|--|
| 6 | Stereo Blend Adjustment (Lch) | Figure 11 | 98.1MHz, 46dB (Stereo 1kHz, Lch, only) | 98.1MHz | Audio Output | Adjust VR2102 for Lch and Rch output level difference to be 8dB. |
| 7 | Stereo Separation Adjustment (Rch) | Figure 11 | 98.1MHz, 72dB (Stereo 1kHz, Rch, only) | 98.1MHz | Audio Output | Proceed same adjustment under step 5 by alternating Lch and Rch. |
| 8 | Stereo Blend Adjustment (Rch) | Figure 11 | 98.1MHz, 46dB (Stereo 1kHz, Rch, only) | 98.1MHz | Audio Output | Proceed same adjustment under stop 6. |

2. TAPE PLAYER SECTION

(1) Connector



(2) Control Settings

| | |
|-----------------------|-----------------|
| Power Switch | ON |
| Fader Control | Center Position |
| Balance Control | Center Position |
| Treble / Bass Control | Center Position |
| Others | OFF |

(3) Adjustment Procedures

| Step | Description | Test Tape | Connection | Test Point | Adjustment Point | Adjustment |
|------|-------------------------|----------------------|------------|----------------------------------|--|--|
| 1 | Head Azimuth Adjustment | MTT-114NB (14kHz) | Figure 12 | T.P.5 (Lch) T.P.6 (Rch) | Head Azimuth Adjustment Screws (Figure 13) | Adjust for Max. and same level output at Normal and Reverse positions. |
| 2 | Dolby Level Adjustment | MTT-150 (400Hz) | Figure 12 | T.P.5 (Lch) T.P.6 (Rch) | VR201 (Lch) VR202 (Rch) | Adjust for 388mV at T.P.5 (Lch) and T.P.6 (Rch). |
| 3 | Tape speed Adjustment | MTT-111N (3kHz) | Figure 12 | T.P.5 (Lch) or T.P.6 (Rch) | Tape Speed Adjustment (Figure 14) | Adjust for 2,970 to 3,090Hz at T.P.5 (T.P.6). |

Adjustment Locations

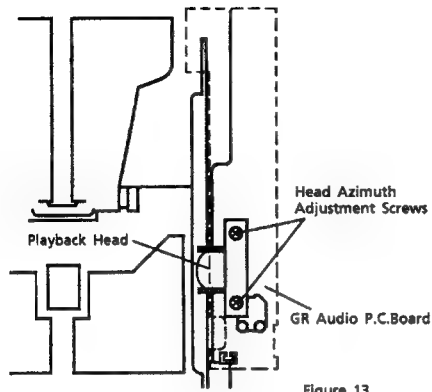


Figure 13

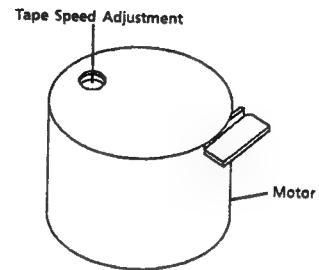
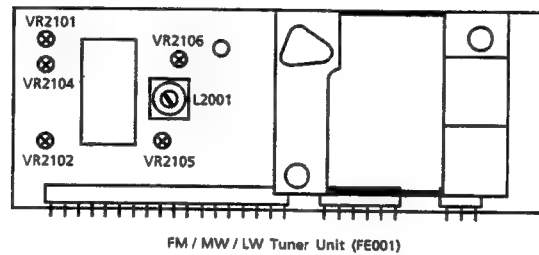
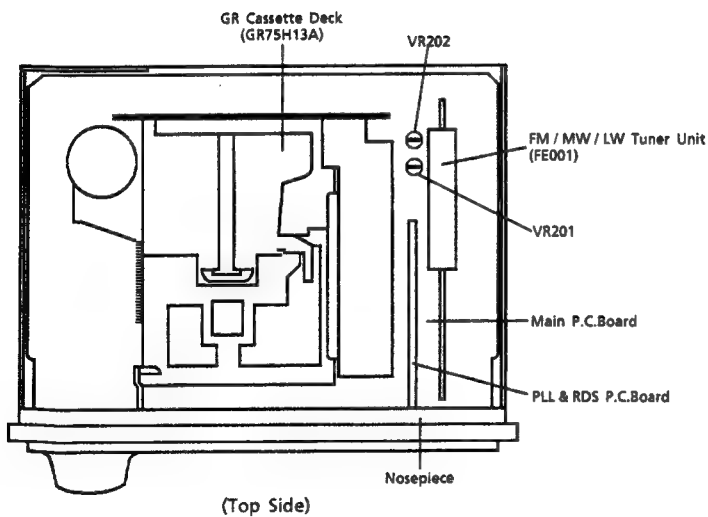


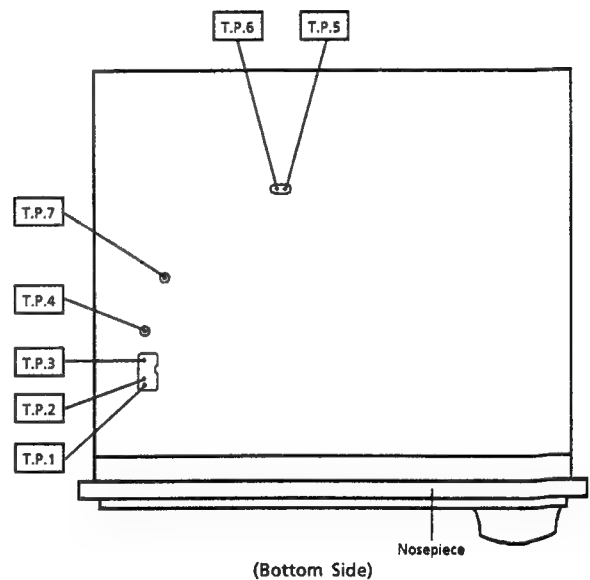
Figure 14



FM / MW / LW Tuner Unit (FE001)



(Top Side)



(Bottom Side)

Note : For the detailed Test Points (T.P.1~T.P.7), refer to the Parts Layout on P.C.Board and Wiring Diagram.

Description of IC Terminal

45552W28 (IC401)

| No. | Symbol | I / O | Terminal Description |
|-----|-------------------------------|-------|---|
| 1 | 7582 $\overline{\text{INH}}$ | O | INH signal output terminal to LC7582W. |
| 2 | 7582 CE | O | Stand by control terminal to LC7582W. |
| 3 | 7582 CLK | O | Communication sync signal output terminal to LC7582W. |
| 4 | 7582 DATA | O | Serial data output terminal to LC7582W. |
| 5 | 7229 $\overline{\text{CS}}$ | O | $\overline{\text{CS}}$ output terminal to Display microcomputer. |
| 6 | 7229 CLK | O | Communication sync signal output terminal to Display microcomputer. |
| 7 | 7229 RST | O | System clock output terminal to Display microcomputer. |
| 8 | ORG / $\overline{\text{GRN}}$ | O | Output terminal for lamp switching. |
| 9 | V_{SS} | — | GND potential terminal. |
| 10 | V_{SS} | — | GND short. |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | EEPCLK | O | Clock data output terminal to EEPROM. |
| 23 | EEPDI | I | Serial data input terminal from EEPROM. |
| 24 | V_{SS} | — | GND potential terminal. |
| 25 | EEPDO | O | Serial data output terminal to EEPROM. |
| 26 | P.ON | O | Power control signal output terminal to LCD Driver. |
| 27 | KS0 | O | Key scan signal output terminal. |
| 28 | KS1 | | |
| 29 | KS2 | | |
| 30 | KS3 | | |
| 31 | V_{SS} | — | GND short. |
| 32 | V_{SS} | — | GND short. |
| 33 | | | |
| 34 | | | |
| 35 | $\overline{\text{RESET}}$ | I | System reset input terminal. |
| 36 | V_{SS} | — | GND short. |
| 37 | REMOCON | I | Remocon data input terminal. |
| 38 | CONT - START | I | Command sync signal input terminal from Main microcomputer. |
| 39 | AREA 0 | I | Initial setting input terminal. |
| 40 | V_{CC} | — | Positive power supply. |
| 41 | X2 | — | Ceramic element connection terminal for system clock OSC. |
| 42 | X1 | | |
| 43 | V_{SS} | — | GND short. |
| 44 | NC | — | Open. |
| 45 | AREA 1 | I | Initial setting input terminal. |
| 46 | V_{SS} | — | GND potential terminal. |
| 47 | V_{SS} | — | GND short. |
| 48 | KR1 | I | Key-matrix signal input terminal. |
| 49 | KR2 | | |

| No. | Symbol | I / O | Terminal Description |
|-----|-------------------------|-------|---|
| 50 | KR3 | I | Key-matrix signal input terminal. |
| 51 | KR4 | | |
| 52 | KR5 | | |
| 53 | KR6 | | |
| 54 | SELF VR | I | VR position signal terminal for audio control. |
| 55 | V _{SS} | — | Positive power supply terminal short. |
| 56 | | | |
| 57 | CONT - STATUS | I | Serial data signal input terminal from Main microcomputer. |
| 58 | CONT - COMMAND | O | Serial data signal output terminal to Main microcomputer. |
| 59 | CONT - \overline{SCK} | I | Communication sync signal input terminal from Main microcomputer. |
| 60 | 7229 C / \overline{D} | O | C / D signal output terminal to Display microcomputer. |
| 61 | 7229 BUSY | I | Busy signal input terminal from Display microcomputer. |
| 62 | V _{SS} | — | GND short. |
| 63 | 7229 SI | O | Serial data output terminal to Display microcomputer. |
| 64 | 7229 \overline{SCK} | O | Serial clock data output terminal to Display microcomputer. |

35265W02 (IC403)

| No. | Symbol | I / O | Terminal Description |
|-----|-----------------|-------|--|
| 1 | C38 | O | Column drive signal output terminal to LCD. |
| 2 | C39 | | |
| 3 | C40 | | |
| 4 | C41 | | |
| 5 | C42 / R15 | O | Row / Column drive signal output terminal to LCD. |
| 6 | C43 / R14 | | |
| 7 | C44 / R13 | | |
| 8 | C45 / R12 | | |
| 9 | C46 / R11 | | |
| 10 | C47 / R10 | | |
| 11 | C48 / R9 | | |
| 12 | C49 / R8 | | |
| 13 | R15 / R7 | O | Row drive signal output terminal to LCD. |
| 14 | R14 / R6 | | |
| 15 | R13 / R5 | | |
| 16 | R12 / R4 | | |
| 17 | R11 / R3 | | |
| 18 | R10 / R2 | | |
| 19 | R9 / R1 | | |
| 20 | R8 / R0 | | |
| 21 | VLC5 | I | Reference voltage input terminal to decide voltage level for Row / Column drive signal to LCD. |
| 22 | VLC1 | | |
| 23 | NC | — | Open. |
| 24 | VLC4 | I | Reference voltage input terminal to decide voltage level for Row / Column drive signal to LCD. |
| 25 | VLC2 | | |
| 26 | VLC3 | | |
| 7 | DO / SI | I / O | 4 bit parallel data and serial data input terminal. |
| 28 | V _{SS} | — | GND short. |
| 29 | | | |
| 30 | NC | — | Open. |
| 31 | | | |
| 32 | BUSY | O | Busy signal output terminal. |
| 33 | V _{DD} | — | Positive power supply terminal. |
| 34 | V _{SS} | — | GND terminal. |

| No. | Symbol | I / O | Terminal Description |
|-----|--------------------------------------|-------|---|
| 35 | $\overline{\text{STB}} / \text{SCK}$ | I | STB / SCK input terminal. |
| 36 | $\text{C} / \overline{\text{D}}$ | I | Command / data input terminal. |
| 37 | Vss | — | GND short. |
| 38 | | | |
| 39 | $\overline{\text{CS}}$ | I | Chip select signal input terminal. |
| 40 | RESET | I | Reset signal input terminal. |
| 41 | CLOCK | I | Clock signal input terminal. |
| 42 | NC | — | Open. |
| 43 | | | |
| 44 | | | |
| 45 | | | |
| 46 | C3 | O | Column drive signal output terminal to LCD. |
| 47 | C4 | | |
| 48 | C5 | | |
| 49 | C6 | | |
| 50 | C7 | | |
| 51 | C8 | | |
| 52 | C9 | | |
| 53 | C10 | | |
| 54 | C11 | | |
| 55 | C12 | | |
| 56 | C13 | | |
| 57 | C14 | | |
| 58 | C15 | | |
| 59 | C16 | | |
| 60 | C17 | | |
| 61 | C18 | | |
| 62 | C19 | | |
| 63 | C20 | | |
| 64 | C21 | | |
| 65 | C22 | | |
| 66 | C23 | | |
| 67 | C24 | | |
| 68 | C25 | | |
| 69 | C26 | | |
| 70 | C27 | | |
| 71 | C28 | | |
| 72 | C29 | | |
| 73 | C30 | | |
| 74 | C31 | | |
| 75 | C32 | | |
| 76 | C33 | | |
| 77 | C34 | | |
| 78 | C35 | | |
| 79 | C36 | | |
| 80 | C37 | | |

55433W08 (IC501)

| No. | Symbol | I / O | Terminal Description |
|-----|---------------------------|-------|---|
| 1 | $\overline{\text{RESET}}$ | I | System reset input terminal. |
| 2 | X1 | O | Ceramic element connection terming for system clock OSC (8MHz). |
| 3 | X2 | I | |

55433W08 (IC501)

| No. | Symbol | I / O | Terminal Description |
|-----|------------------|-------|---|
| 4 | V _{CC} | — | Positive power supply terminal. |
| 5 | | | |
| 6 | NMI | I | Battery / ACC detection terminal. |
| 7 | V _{CC} | — | Positive power supply terminal. |
| 8 | | | |
| 9 | DTS SCK | O | Communication sync signal output terminal to DTS microcomputer. |
| 10 | DTS CMD | O | Serial data output terminal to DTS microcomputer. |
| 11 | DTS STS | I | Serial data input terminal from DTS microcomputer. |
| 12 | V _{SS} | — | GND terminal. |
| 13 | DTS START | O | Command sync signal output terminal to DTS microcomputer. |
| 14 | NC | — | Open. |
| 15 | DTS STBY | O | Stand by pulse output terminal to DTS microcomputer. |
| 16 | DTS MUTE | I | Audio mute signal input terminal from DTS microcomputer. |
| 17 | DTS CE | O | Standby control terminal to DTS microcomputer. |
| 18 | ACC+5 | I | ACC power supply detection terminal. |
| 19 | BAT+5 | I | Battery power supply detection terminal. |
| 20 | O. REM | O | Remote signal output terminal. |
| 21 | EEP DI | I | Serial data input terminal from EEPROM. |
| 22 | EEP DO | O | Serial data output terminal from EEPROM. |
| 23 | NC | — | Open. |
| 24 | TMR DATA | I | Timer data input terminal from Timer IC. |
| 25 | TMR OE | O | OE signal output terminal to Timer IC. |
| 26 | TMR CLK | O | CLK signal output terminal to Timer IC. |
| 27 | TMR S2 | O | Timer data increment signal output terminal to Timer IC. |
| 28 | TMR S1 | O | Correction girder choice signal output terminal to Timer IC. |
| 29 | ACC+5 | I | ACC power supply detection terminal. |
| 30 | MIC L | I | Low degree signal input terminal. |
| 31 | MIC M | I | Middle degree signal input terminal. |
| 32 | MIC H | I | High degree signal input terminal. |
| 33 | NOSE ON | I | Front panel detection terminal. |
| 34 | AREA 0 | I | Initial setting input terminal. |
| 35 | AREA 1 | | |
| 36 | LCD CTRT | O | Voltage control terminal to LCD. |
| 37 | M.S.DET | I | Music ON / OFF switching signal input terminal. |
| 38 | AV _{SS} | I | GND short. |
| 39 | O.FAST | O | Gain control signal input terminal from M.S.IC. |
| 40 | MTL | I | Metal tape detection terminal. |
| 41 | F / R | O | FOR / REV control Terminal to TAPE EQ AMP. |
| 42 | PACK IN | I | Switch to detect cassette is installed into cassette holder on not. |
| 43 | TP ALM | O | Alarm output / audio signal switching output terminal. |
| 44 | O.MOTOR | O | Determines start and stop of motor in GR mechanism. |
| 45 | PULL UP | O | Determines rotation direction of motor in GR mechanism. |
| 46 | EJ.SOL | O | Eject solenoid control signal output terminal GR mechanism. |
| 47 | V _{CC} | — | Positive power supply terminal. |
| 48 | RF.SOL | O | RF solenoid control signal output terminal in GR mechanism. |
| 49 | PLY.SOL | O | Play solenoid control signal output terminal in GR mechanism. |
| 50 | RUN DET | I | Signal showing take-up reel is rotating or not. |
| 51 | PACK DN | I | Switch to detect cassette holder is moved down completely. |
| 52 | DOL B | O | Dolby B NR, ON signal output terminal. |
| 53 | DOL C | O | Dolby C NR, ON signal output terminal. |
| 54 | R / T | O | Tape / Radio audio signal switching output terminal. |
| 55 | INT / EXT | O | Inside / Outside audio signal switching output terminal. |

| No. | Symbol | I / O | Terminal Description |
|-----|-----------------|-------|--|
| 56 | V _{SS} | — | GND Terminal. |
| 57 | E.V.CE | O | Standby control terminal to Electric Volume IC. |
| 58 | E.V.CLK | O | Communication sync signal output terminal to Electric Volume IC. |
| 59 | E.V.DATA | O | Serial data output terminal to Electric Volume IC. |
| 60 | PRE MUTE | O | Pre-out audio mute signal output terminal. |
| 61 | NC | — | Open. |
| 62 | BUS DET | I | Busline date detection terminal. |
| 63 | BUS RST | O | Reset signal output terminal to Bus IC. |
| 64 | BUS R / W | O | Read / Write signal output terminal to Bus IC. |
| 65 | BUS RS | O | Resister signal output terminal to Bus IC. |
| 66 | BUS STS | I | Serial data input terminal from Bus IC. |
| 67 | BUS CMD | O | Serial data output terminal to Bus IC. |
| 68 | BUS CLK | O | Communication sync signal output terminal to Bus IC. |
| 69 | IN PAU | I | Pause signal input terminal. |
| 70 | IN INT | I | Interrupt signal input terminal. |
| 71 | P. ON CONT | O | Power control signal output terminal. |
| 72 | LCD P. ON | O | Power control signal output terminal for LCD back light. |
| 73 | V _{SS} | — | GND Terminal. |
| 74 | NOSE PON | O | Power control signal output terminal for Display microcomputer and driver. |
| 75 | CONT RST | O | Reset control signal output terminal to Display microcomputer. |
| 76 | NC | — | Open. |
| 77 | CONT STR | O | Command sync signal output terminal to Display microcomputer. |
| 78 | CONT STS | O | Serial data output terminal to Display microcomputer. |
| 79 | CONT CMD | I | Serial data input terminal to Display microcomputer. |
| 80 | CONT SCK | O | Communication sync signal output terminal to Display microcomputer. |

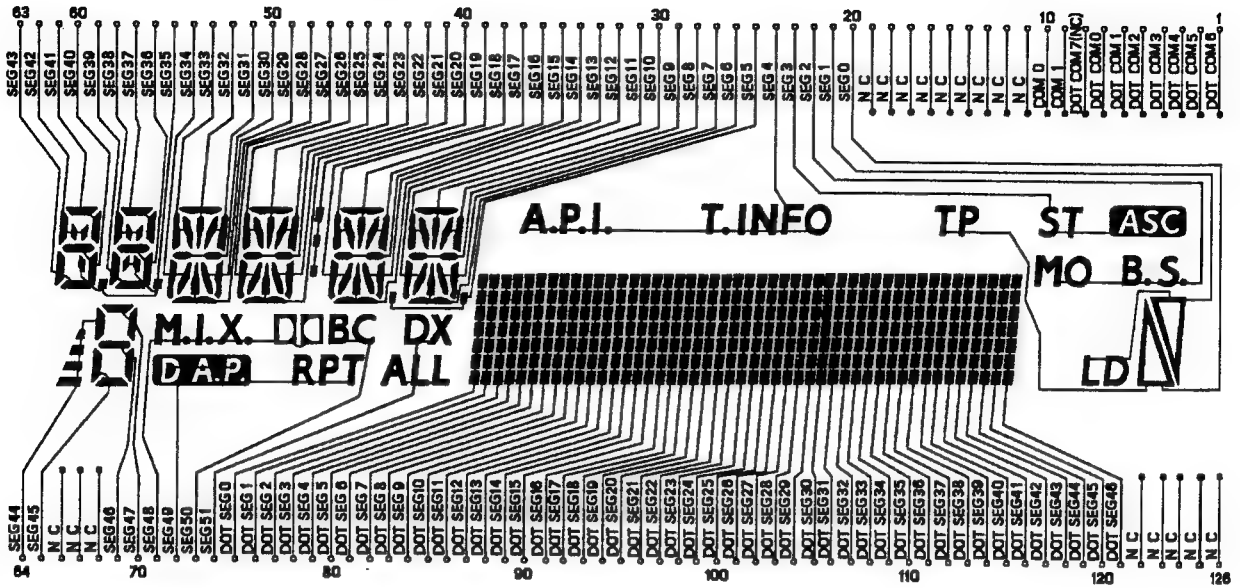
45258W02 (IC504)

| No. | Symbol | I / O | Terminal Description |
|-----|-----------------|-------|--|
| 1 | CE1 | O | CE1 control terminal for S-RAM. |
| 2 | NC | — | Open. |
| 3 | DTS MUTE | O | Audio mute output terminal. |
| 4 | 7073 RESET | O | Control the reset for LC7073M. |
| 5 | 50KREF | O | High output when REF frequency becomes 50kHz in FM mode. |
| 6 | RESET | I | System reset input terminal. |
| 7 | X2 | — | Output terminal for system clock OSC. |
| 8 | X1 | — | Output terminal for system clock OSC. |
| 9 | V _{SS} | — | GND terminal for device. |
| 10 | CE2 | O | CE2 control terminal for S-RAM. |
| 11 | NC | — | Open. |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | A10 | O | Input / Output terminal for S-RAM address signal. |
| 16 | A9 | | |
| 17 | A8 | | |
| 18 | AD7 | I / O | Input / Output terminal for S-RAM address signal. |
| 19 | AD6 | | |
| 20 | AD5 | | |
| 21 | AD4 | | |
| 22 | AD3 | | |
| 23 | AD2 | | |
| 24 | V _{SS} | — | GND terminal for device. |

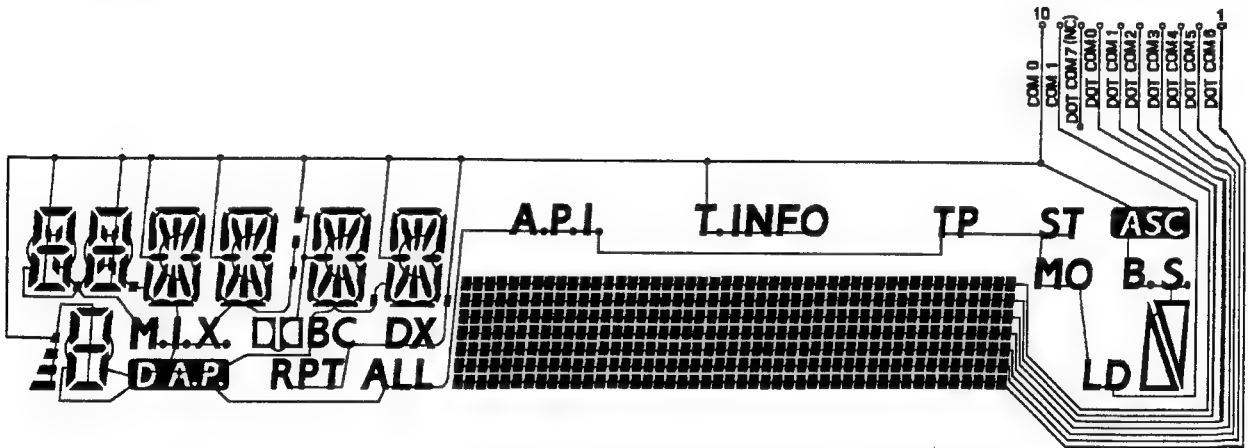
| No. | Symbol | I / O | Terminal Description |
|-----|--------------------------------|-------|--|
| 25 | AD1 | I / O | Input / Output terminal for S-RAM address signal. |
| 26 | AD0 | | |
| 27 | LE | O | LE control terminal for latch. |
| 28 | DTS STB | I | Return from standby to DTS. |
| 29 | RDS CLK | I | Communication data sync signal input terminal from LC7073M. |
| 30 | RDS START | I | Data sync signal input terminal from LC7073M. |
| 31 | RDS DATA | I | Serial data input terminal from LC7073M. |
| 32 | PLL DATA IN | I | PLL data input terminal. |
| 33 | PULL UP | — | Pull up terminal. |
| 34 | DTS START | I | Command sync signal input from main microcomputer. |
| 35 | DTS CMD | I | Serial data input terminal from main microcomputer. |
| 36 | V _{SS} | — | GND short. |
| 37 | NC | — | Open. |
| 38 | DTS CLOCK | I | Communication data sync signal input terminal from Main microcomputer. |
| 39 | DTS STATUS | O | Serial data output terminal to main microcomputer. |
| 40 | V _{CC} | — | Power supply terminal for device. |
| 41 | | | |
| 42 | AV _{SS} | — | GND terminal for A/D converter. |
| 43 | AV _{REF} | — | Reference Voltage input terminal for A/D converter. |
| 44 | ST | I | Stereo signal input terminal. |
| 45 | PULL UP | — | Pull up terminal. |
| 46 | PULL UP | — | Pull up terminal. |
| 47 | MULTIPATH | I | Port detects multipath interference of station. |
| 48 | ADJON | I | Port detects multipath interference of station. |
| 49 | S.METER | I | Signal meter input terminal. |
| 50 | PULL UP | — | Pull up terminal. |
| 51 | PULL DOWN | — | Pull down terminal. |
| 52 | PLL CLOCK | O | Communication data sync signal output terminal. |
| 53 | PLL DATA | O | Serial data output terminal. |
| 54 | LPE SW | O | LPF time constant switching terminal to obtain fast response in AF search and FM seek operation. |
| 55 | IF MUTE | O | Mute output terminal to prevent shock noises in AF search operation. |
| 56 | PLL CE | O | Data communication control signal output terminal. |
| 57 | NC | — | Open. |
| 58 | LW | O | LW band selection terminal. |
| 59 | FM / $\overline{\text{AM}}$ | O | FM / AM (MW / LW) bands selection terminal. |
| 60 | LOCAL / $\overline{\text{DX}}$ | O | SEEK sensitivity switch control output terminal. |
| 61 | MONO | O | Stereo / Mono switch control output terminal. |
| 62 | DTS CE | I | Terminal to make DTS in standby status. |
| 63 | SD | I | Station detector signal input terminal for FM / AM. |
| 64 | $\overline{\text{WR}}$ | O | F-RAM $\overline{\text{WE}}$ control signal. |

LCD Display

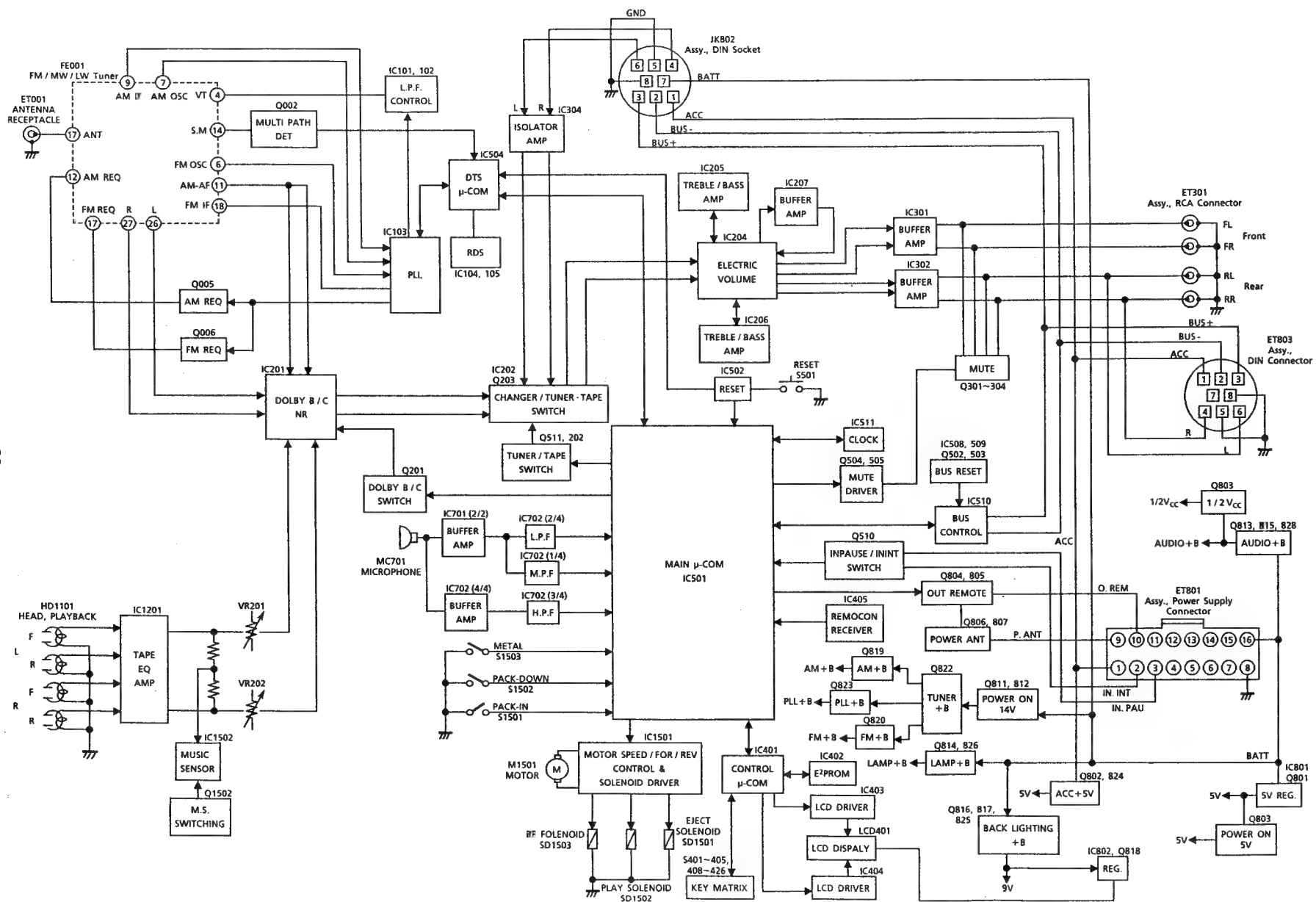
SEGMENT



COMMON



Block Diagram



Tuner Schematic Diagram

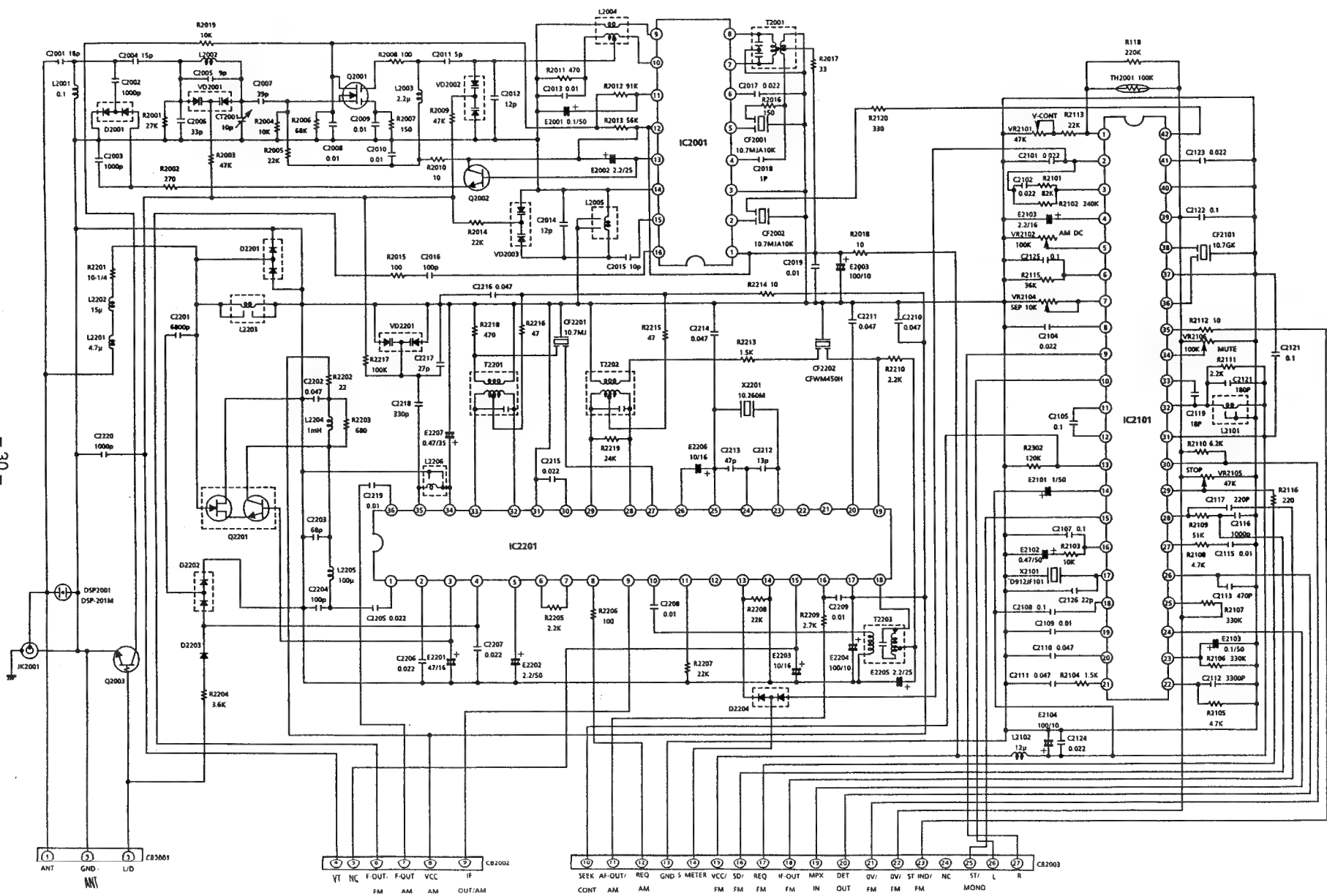
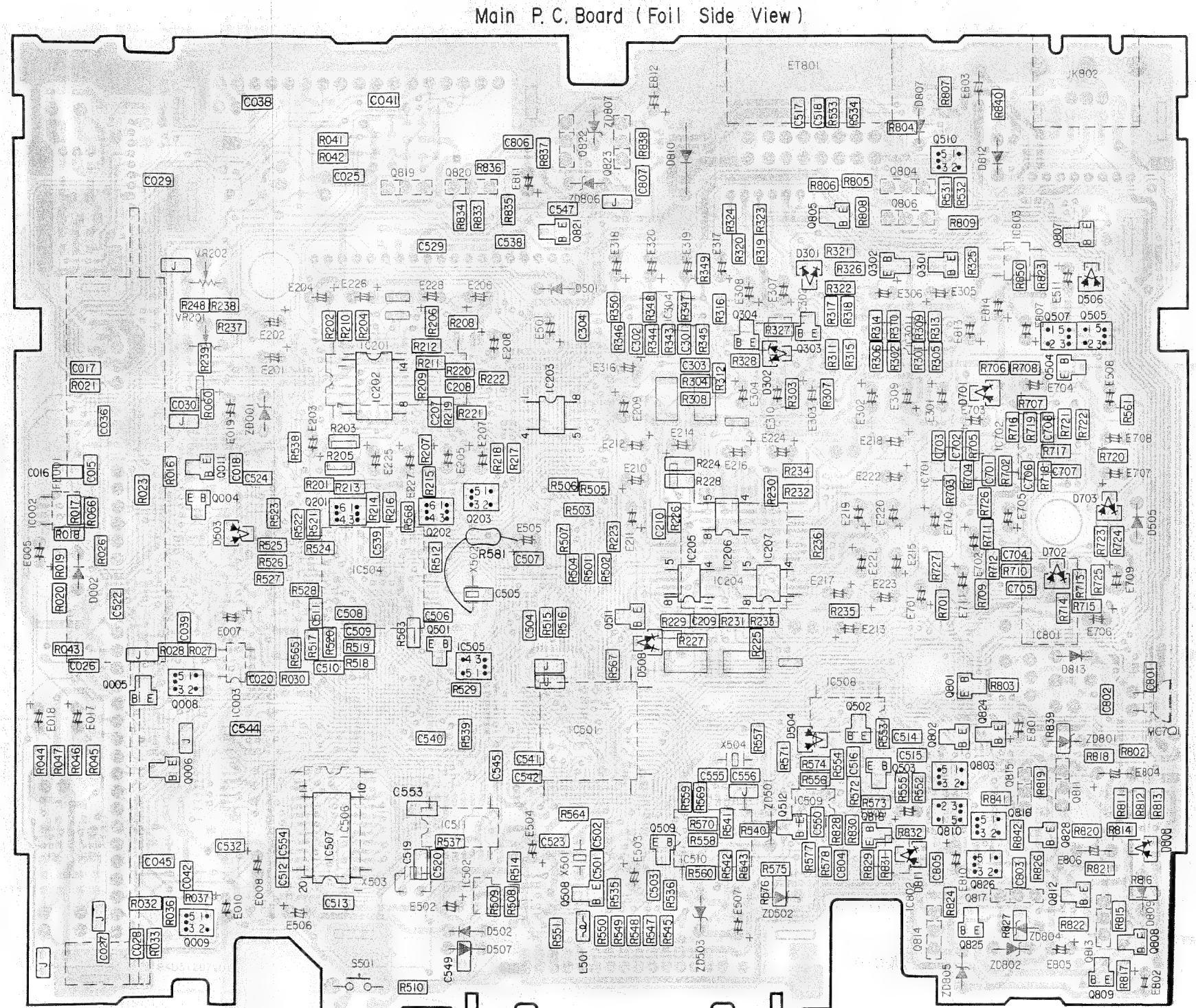
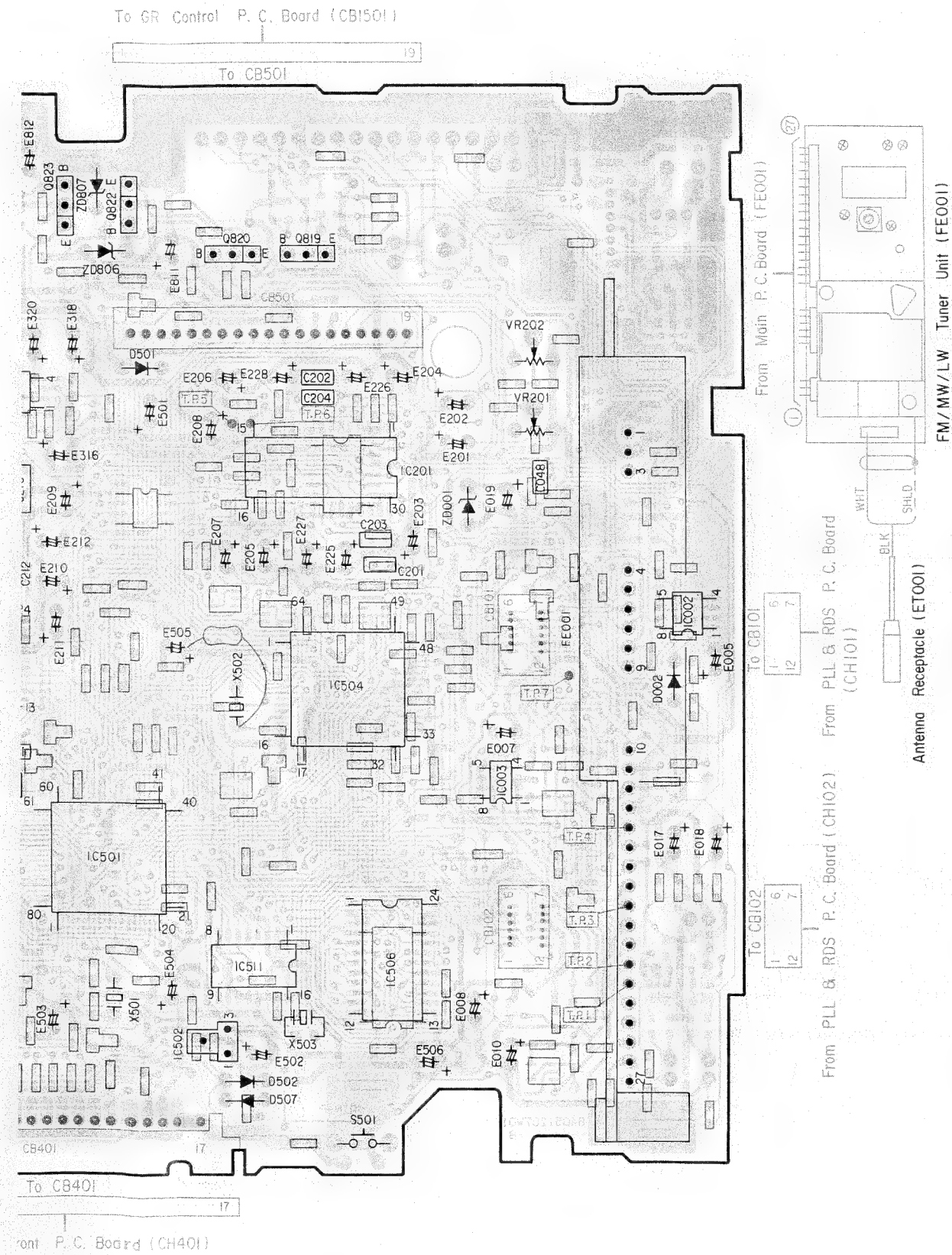


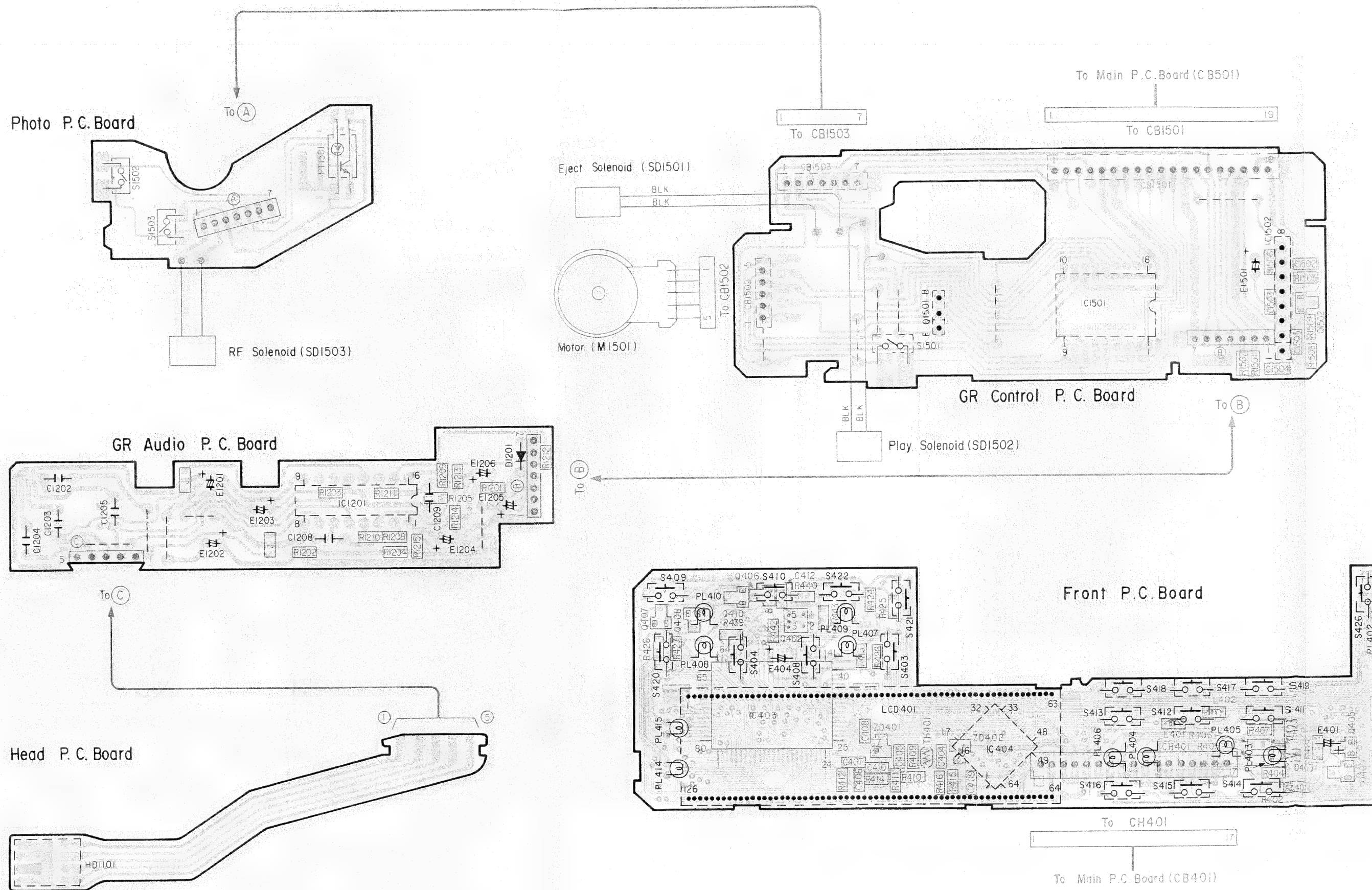


Diagram (1/2)



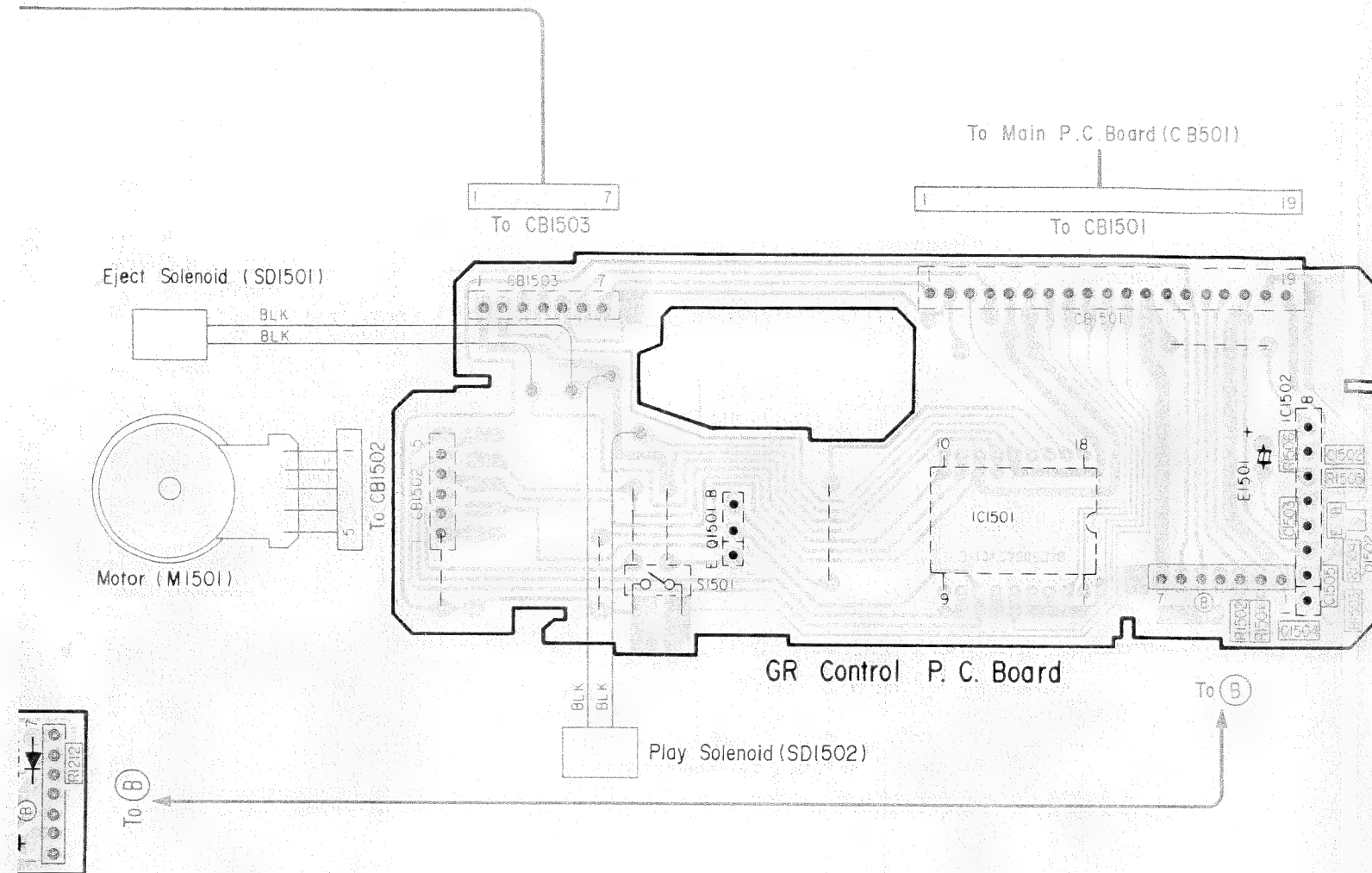
Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

Parts Layout on P.C. Boards and Wiring Diagram (2/2) All P.C. Boards viewed from soldered side.

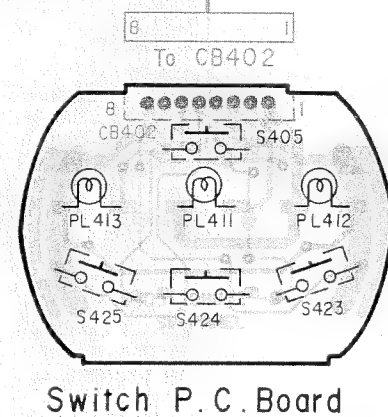
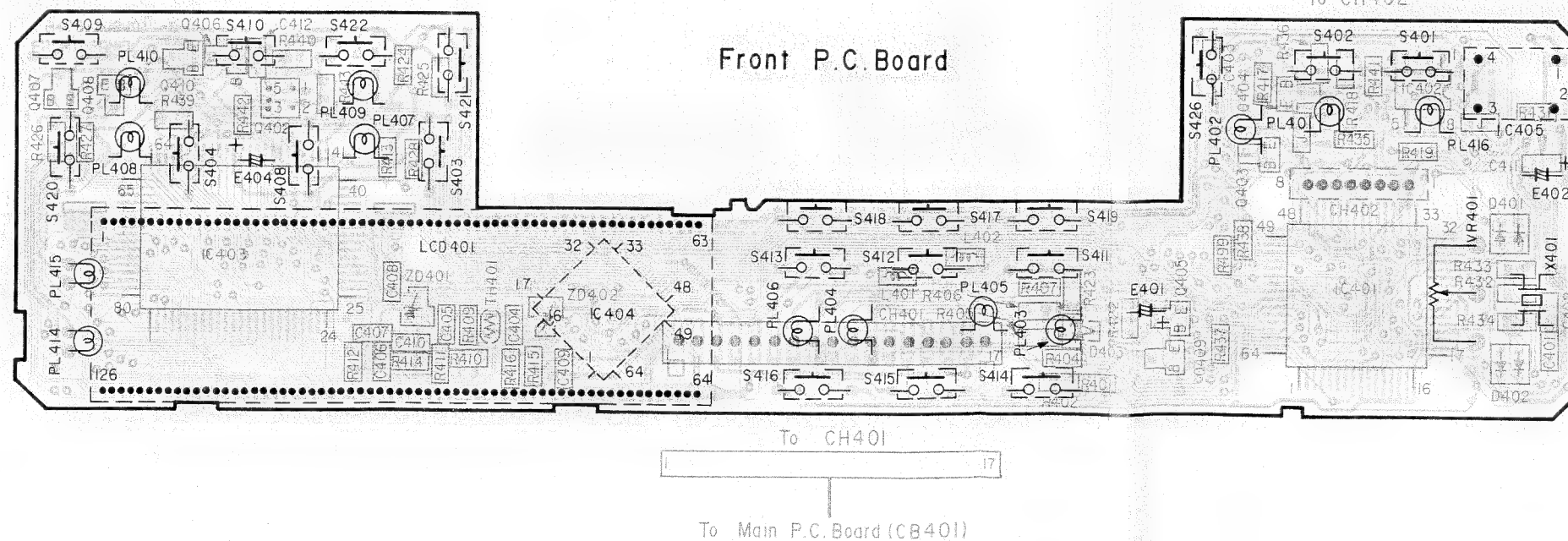
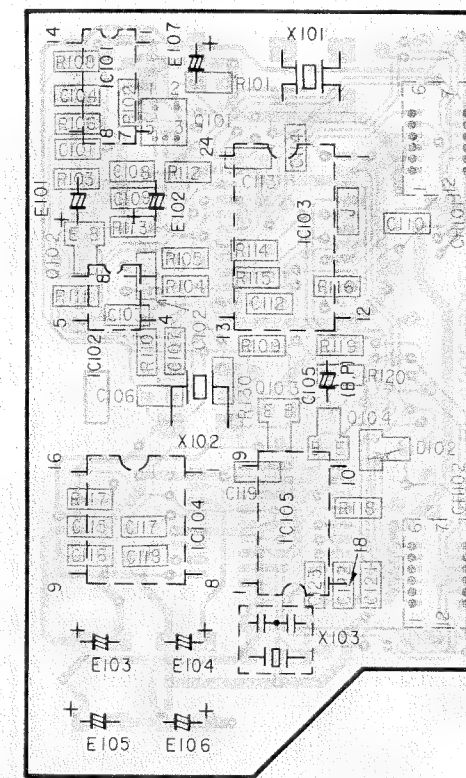


gram (2/2) All P.C. Boards viewed from soldered side.

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern



PLL / RDS P.C. Board

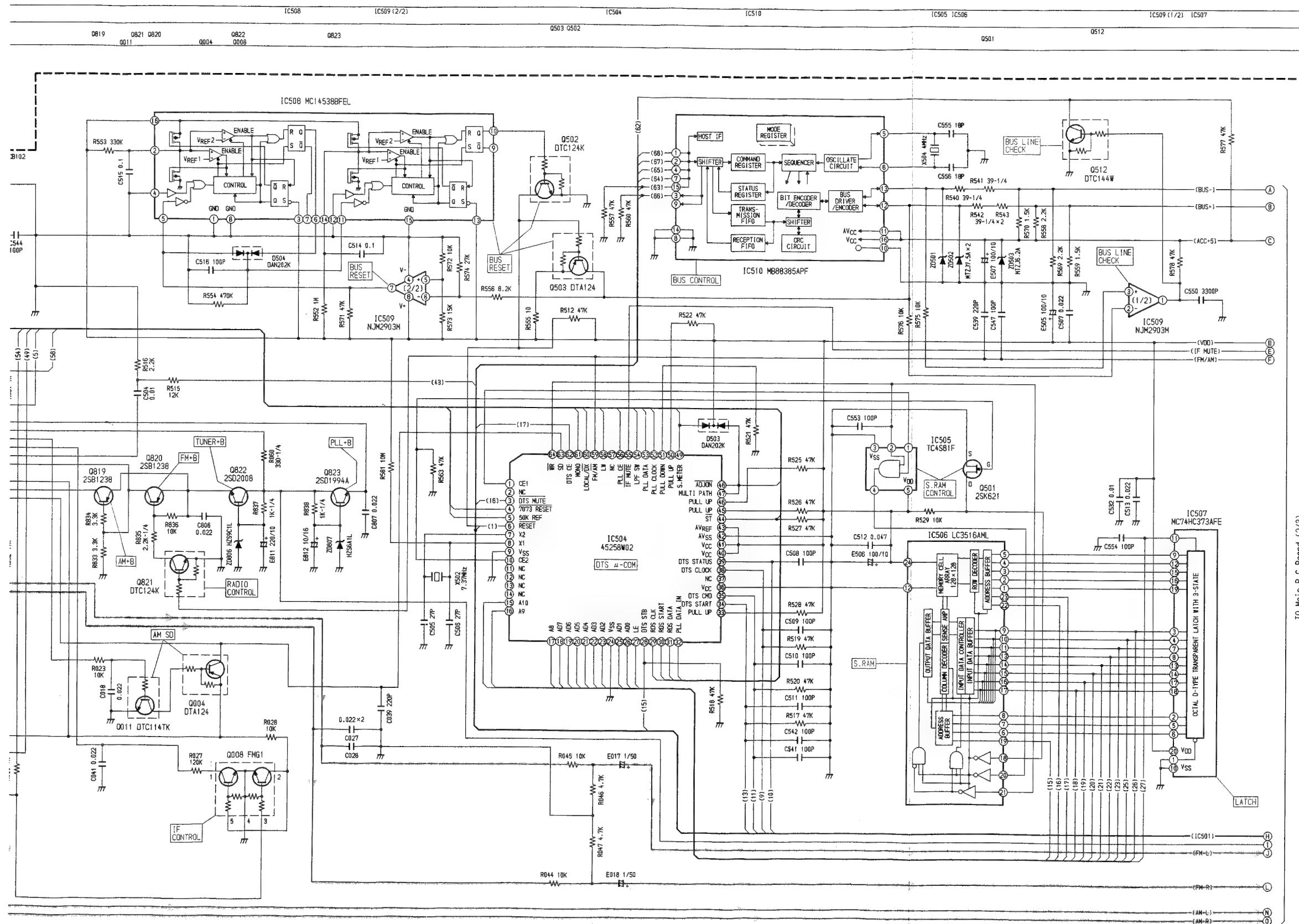


5



NOTES:

1. All resistance values are in ohms. $K = 1,000$
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$



| IC002 | IC003 | IC505 | IC506 | |
|--------|--------|-------|-------------|--|
| 1 4.9V | 1 2.5V | 1 5V | 1 P5 13 P5 | |
| 2 4.9V | 2 0V | 2 5V | 2 P5 14 P5 | |
| 3 4.8V | 3 0V | 3 0V | 3 P5 15 P5 | |
| 4 0V | 4 0V | 4 5V | 4 P5 16 P5 | |
| 5 — | 5 2.5V | 5 5V | 5 P5 17 P5 | |
| 6 — | 6 0V | IC508 | 6 P5 18 P5 | |
| 7 — | 7 0V | | 7 P5 19 P5 | |
| 8 8.6V | 8 4.9V | | 8 P5 20 P5 | |
| IC507 | | | 9 P5 21 P5 | |
| | | | 10 P5 22 P5 | |
| | | | 11 P5 23 P5 | |
| | | | 12 0V 24 5V | |

| IC507 | | | | 6 | PS | 12 | 0V | 24 | 5V |
|-------|----|----|----|----|------|-------|----|----|----|
| 1 | 0V | 11 | PS | 7 | — | IC509 | | | |
| 2 | PS | 12 | PS | 8 | 0V | | | | |
| 3 | PS | 13 | PS | 9 | — | | | | |
| 4 | PS | 14 | PS | 10 | 0V | | | | |
| 5 | PS | 15 | PS | 11 | 4.2V | | | | |
| 6 | PS | 16 | PS | 12 | 0V | | | | |
| 7 | PS | 17 | PS | 13 | 5V | 1 | PS | | |
| 8 | PS | 18 | PS | 14 | 4.2V | 2 | PS | | |
| 9 | PS | 19 | PS | 15 | 0V | 3 | PS | | |
| 10 | 0V | 20 | PS | 16 | 5V | 4 | 0V | | |
| | | | | | | 5 | 2V | | |
| | | | | | | 6 | PS | | |
| | | | | | | 7 | PS | | |
| | | | | | | 8 | 5V | | |

| IC504 | | | | | IC510 | | | | |
|-------|-------|-----------------|----|------|-------|----|--|--|--|
| 1 | P5 | | 33 | 5V | 1 | P5 | | | |
| 2 | — | | 34 | P5 | 2 | P5 | | | |
| 3 | 5V/0V | DT5 MUTE ON/OFF | 35 | P5 | 3 | P5 | | | |
| 4 | 5V | | 36 | P5 | 4 | P5 | | | |
| 5 | 5V/0V | API ON/OFF | 37 | — | 5 | P5 | | | |
| 6 | 5V | | 38 | P5 | 6 | P5 | | | |
| 7 | P5 | | 39 | P5 | 7 | P5 | | | |
| 8 | P5 | | 40 | 5V | 8 | 0V | | | |
| 9 | 0V | | 41 | 5V | 9 | — | | | |
| 10 | P5 | | 42 | 0V | 10 | 0V | | | |
| 11 | — | | 43 | 5V | 11 | 5V | | | |
| 12 | — | | 44 | 5/0V | 12 | P5 | | | |
| 13 | — | | 45 | 5V | 13 | P5 | | | |
| 14 | — | | 46 | 5V | 14 | 0V | | | |
| 15 | P5 | | 47 | 4.6V | 15 | 5V | | | |
| 16 | P5 | | 48 | 4.6V | 16 | 5V | | | |

| | | | | |
|----|----|----|---------|----------------------|
| 17 | PS | 49 | 4.2V | |
| 18 | PS | 50 | 5V | |
| 19 | PS | 51 | 0V | |
| 20 | PS | 52 | PS | |
| 21 | PS | 53 | PS | |
| 22 | PS | 54 | 5V | |
| 23 | PS | 55 | SV / OV | FF MONO ON / OFF |
| 24 | OV | 56 | PS | |
| 25 | PS | 57 | — | |
| 26 | PS | 58 | SV / OV | LW / OTHER (FM / AM) |
| 27 | PS | 59 | SV / OV | FM / AM, LW |
| 28 | PS | 60 | SV / OV | LO / DX SEEK |
| 29 | PS | 61 | SV / OV | FF MONO ON / OFF |
| 30 | PS | 62 | SV / OV | ACC ON / OFF |
| 31 | PS | 63 | PS | |
| 32 | PS | 64 | 5V | |

| | E | C | B | MODE |
|------|-------------|-------------|-------------|-----------------|
| Q004 | 4.9V | 0V | 4.4V | |
| Q005 | 0V | 6.9V / 0V | 0V / 4.4V | AM SEEK / OTHER |
| Q006 | 0V | 1.4V / 0V | 0V / 4.4V | FM SEEK / OTHER |
| Q011 | 0V | 4.9V | 0V | |
| Q502 | 0V | 5V | 0V | |
| Q503 | 5V | 1.9V | 5V | |
| Q512 | 0V | PS | PS | |
| Q819 | 8.7V / 8.6V | 0V / 8.6V | 8.6V / 7.9V | FM / MW / LW |
| Q820 | 8.7V | 8.6V / 0.9V | 8V / 8.7V | FM / MW / LW |
| Q821 | 0V | 0.1V / 8.7V | 5V / 0V | FM / MW / LW |
| Q822 | 8.6V / 0V | 14V / 0V | 9.2V / 0V | POWER ON / OFF |
| Q823 | 4.9V / 0V | 14V / 0V | 5.5V / 0V | POWER ON / OFF |

| | 1 | 2 | 3 | 4 | 5 | MODE |
|------|---------|---------|---------|----|---------|----------------|
| Q008 | 0V/2.8V | 3.5V/0V | 0V/4.6V | 0V | 3.5V/0V | FM SEEK ON/OFF |
| Q009 | 0V/4.9V | 3.5V/0V | 0V/4.6V | 0V | 3.5V/0V | FM SEEK ON/OFF |

| | S | D | G | MODE |
|------|----|-------|-------|------------|
| Q501 | 0V | 0V/5V | 5V/0V | ACC ON/OFF |

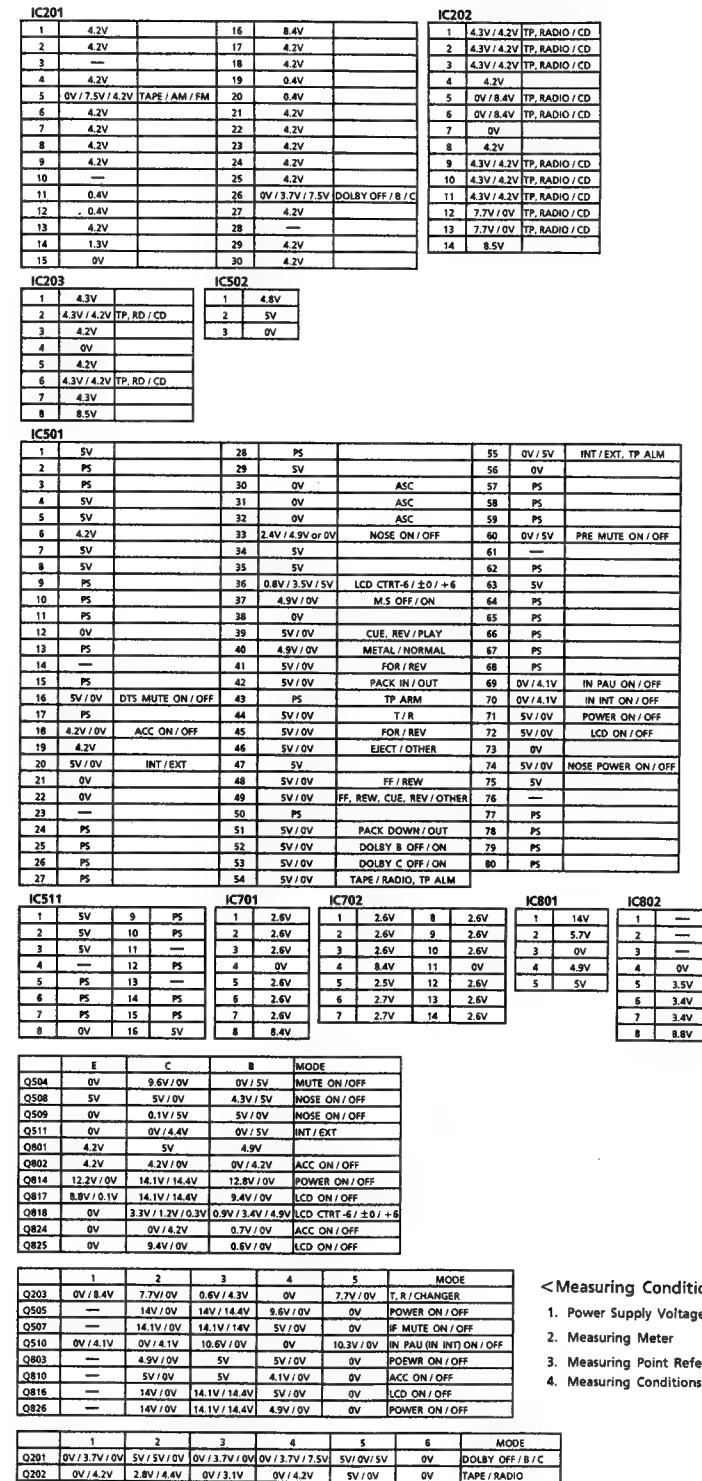
<Measuring Conditions>

- | | |
|------------------------------|----------------------------|
| 1. Power Supply Voltage | : DC14.4V |
| 2. Measuring Meter | : Digital Multi Volt Meter |
| 3. Measuring Point Reference | : Between Ground |
| 4. Measuring Conditions | : No Signal Input |
| | FM 98.1MHz |
| | MW 999kHz |
| | LW 216kHz |
| | TAPE Blank |

1

2

1. All resistance values are in ohms. $K = 1,000$
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$



<Measuring Conditions>

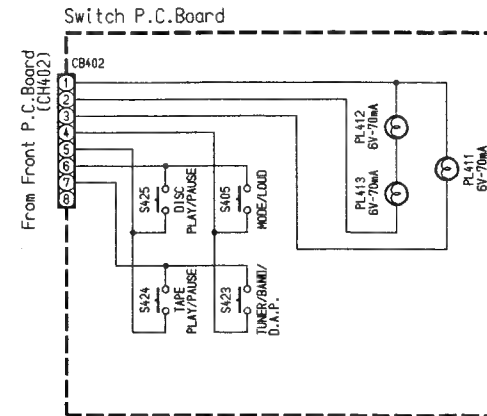
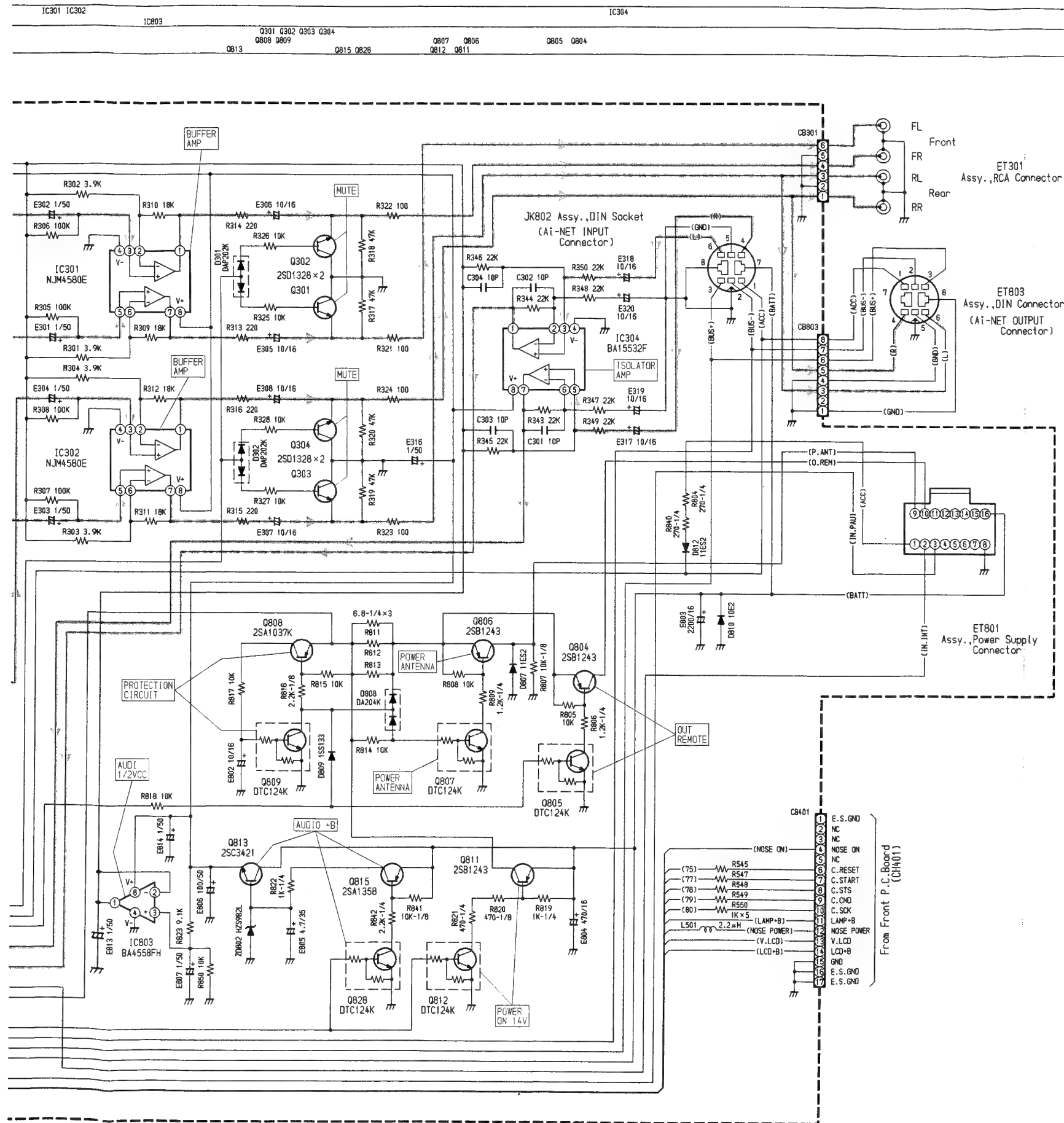
| | |
|------------------------------|----------------------------|
| 1. Power Supply Voltage | : DC14.4V |
| 2. Measuring Meter | : Digital Multi Volt Meter |
| 3. Measuring Point Reference | : Between Ground |
| 4. Measuring Conditions | : No Signal Input |
| | FM 98.1MHz |
| | MW 999kHz |
| | LW 216kHz |
| | TAPE Blank |

5

Main P.C.Board (3/3)

NOTES:

1. All resistance values are in ohms. $K = 1,000$
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$



IC204

| | | | | | |
|----|------|----|------|----|------|
| 1 | 3.8V | 17 | PS | 33 | 4.2V |
| 2 | 4.2V | 18 | — | 34 | — |
| 3 | — | 19 | — | 35 | 4.2V |
| 4 | 4.2V | 20 | PS | 36 | 4.2V |
| 5 | 4.2V | 21 | 4.9V | 37 | 4.2V |
| 6 | 4.2V | 22 | 0V | 38 | 4.2V |
| 7 | — | 23 | 4.2V | 39 | 4.2V |
| 8 | 4.2V | 24 | 4.2V | 40 | 4.2V |
| 9 | 4.2V | 25 | 4.2V | 41 | — |
| 10 | 4.2V | 26 | 4.2V | 42 | 8.3V |
| 11 | 4.2V | 27 | 4.2V | 43 | 8.4V |
| 12 | 4.2V | 28 | 4.2V | 44 | — |
| 13 | 4.2V | 29 | 4.2V | 45 | 4.2V |
| 14 | 4.2V | 30 | — | 46 | 4.2V |
| 15 | 0V | 31 | 4.2V | 47 | 4.2V |
| 16 | PS | 32 | 4.2V | 48 | 4.2V |

IC205

| | | | | | |
|---|------|---|------|---|------|
| 1 | 4.2V | 1 | 4.2V | 1 | 4.4V |
| 2 | 4.2V | 2 | 4.2V | 2 | 4.4V |
| 3 | 4.2V | 3 | 4.2V | 3 | 3.7V |
| 4 | 0V | 4 | 0V | 4 | 0V |
| 5 | 4.2V | 5 | 4.2V | 5 | 3.7V |
| 6 | 4.2V | 6 | 4.2V | 6 | 4.4V |
| 7 | 4.2V | 7 | 4.2V | 7 | 4.4V |
| 8 | 8.4V | 8 | 8.4V | 8 | 8.4V |

IC301, 302, 304

| | | | |
|---|------|---|------|
| 1 | 4.3V | 1 | 4.2V |
| 2 | 4.2V | 2 | 4.2V |
| 3 | 4.2V | 3 | 4.2V |
| 4 | 0V | 4 | 0V |
| 5 | 4.2V | 5 | — |
| 6 | 4.2V | 6 | — |
| 7 | 4.3V | 7 | — |
| 8 | 8.4V | 8 | 8.9V |

IC803

| | | | |
|---|------|---|------|
| 1 | 4.3V | 1 | 4.2V |
| 2 | 4.2V | 2 | 4.2V |
| 3 | 4.2V | 3 | 4.2V |
| 4 | 0V | 4 | 0V |
| 5 | 4.2V | 5 | — |
| 6 | 4.2V | 6 | — |
| 7 | 4.3V | 7 | — |
| 8 | 8.4V | 8 | 8.9V |

| | E | C | B | MODE |
|------|---------------|---------------|-------------|----------------|
| Q301 | 0V | 0V | 0.7V / 0V | MUTE ON / OFF |
| Q302 | 0V | 0V | 0.7V / 0V | MUTE ON / OFF |
| Q303 | 0V | 0V | 0.7V / 0V | MUTE ON / OFF |
| Q304 | 0V | 0V | 0.7V / 0V | MUTE ON / OFF |
| Q804 | 13.9V / 14V | 13.9V / 0V | 13.3V / 14V | INT / EXT |
| Q805 | 0V | 0.1V / 14V | 3.7V / 0V | INT / EXT |
| Q806 | 14V / 0V | 14V / 0V | 13.4V / 0V | POWER ON / OFF |
| Q807 | 0V | 0.1V / 0V | 9.8V / 0V | POWER ON / OFF |
| Q808 | 14.1V | 0V | 14V | — |
| Q809 | 0V | 14V | 0V | — |
| Q811 | 14.1V / 14.4V | 14V / 0V | 13.4V / 14V | POWER ON / OFF |
| Q812 | 0V | 0.1V / 14.4V | 4.9V / 0.1V | POWER ON / OFF |
| Q813 | 8.2V / 0V | 14.1V / 14.4V | 8.9V / 0V | POWER ON / OFF |
| Q815 | 14.1V / 14.4V | 14.1V / 0V | 14.4V | POWER ON / OFF |
| Q828 | 0V | 0.1V / 14.4V | 4.9V / 0V | POWER ON / OFF |

<Measuring Conditions>

1. Power Supply Voltage : DC14.4V
 2. Measuring Meter : Digital Multi Volt Meter
 3. Measuring Point Reference : Between Ground
 4. Measuring Conditions : No Signal Input
- FM 98.1MHz
MW 999kHz
LW 216kHz
TAPE Blank

Schematic Diagram (4/5)

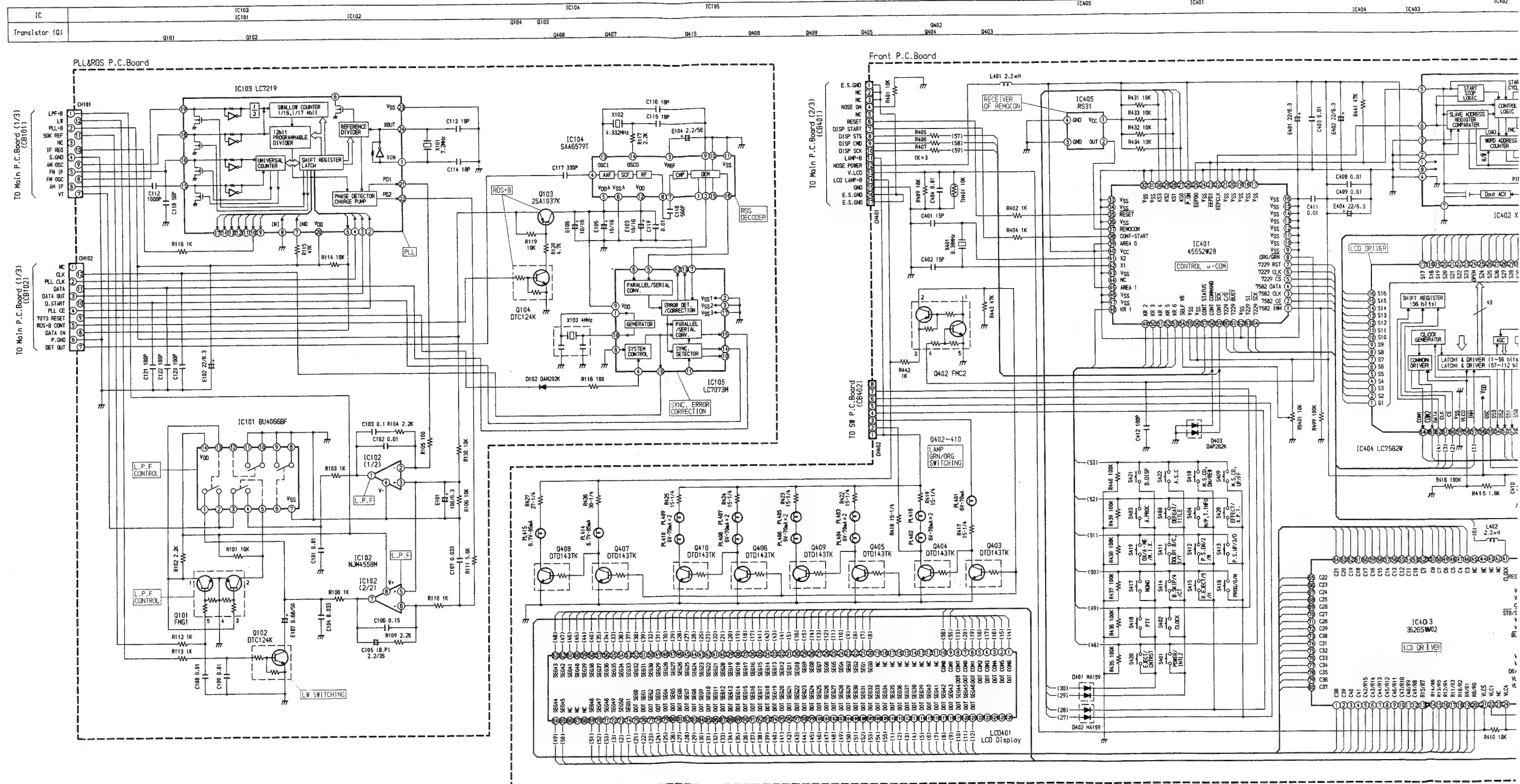
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2

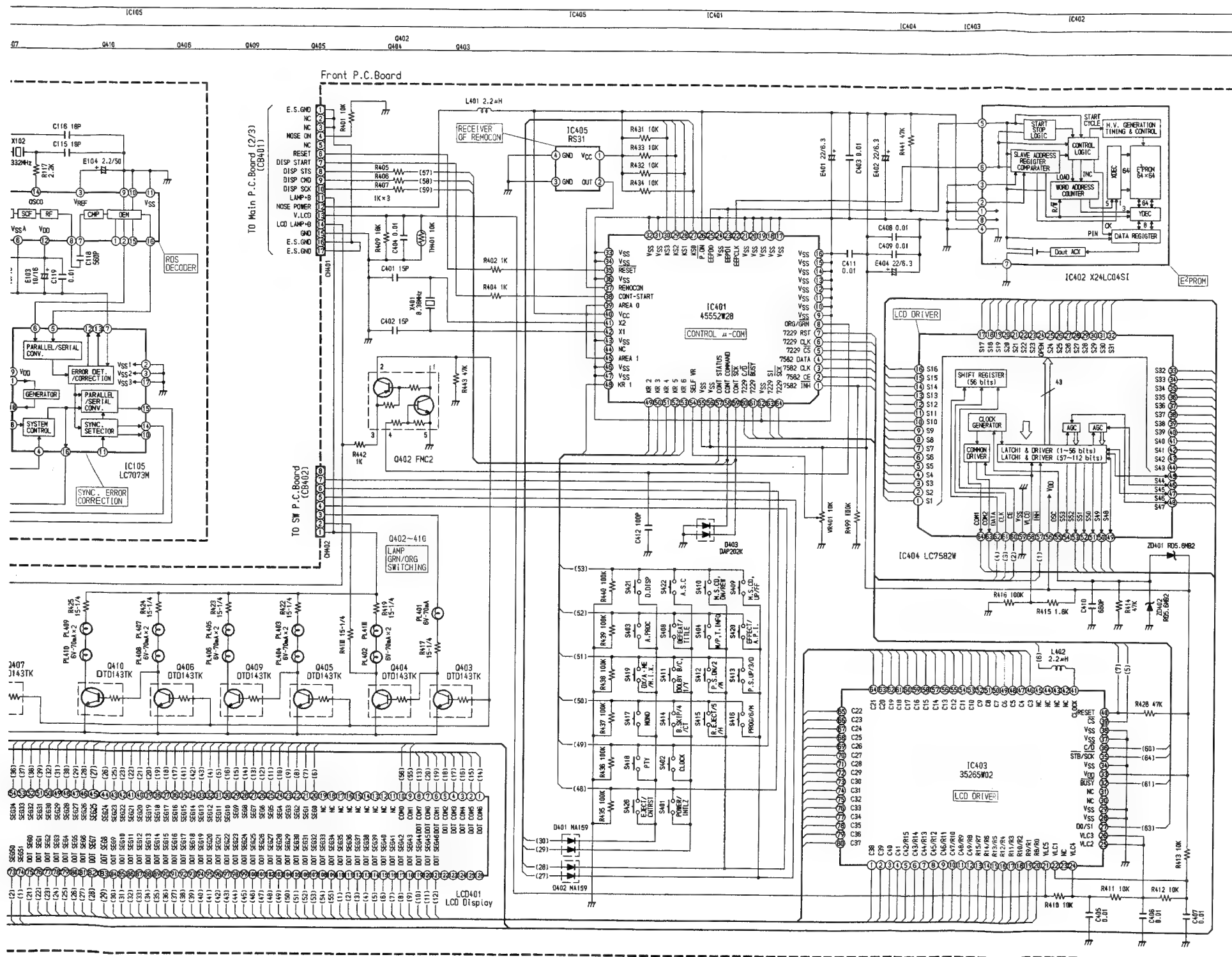
3

4

1



1. All resistance values are in ohms. K = 1,000

$$\frac{1}{1,000,000}$$


| IC101 | | IC102 | | IC103 | |
|-------|------------------------|-------|------|-------|--------------|
| 1 | 5.3V | 1 | 5.3V | 1 | PS 13 — |
| 2 | 5.3V | 2 | 2.4V | 2 | PS 14 — |
| 3 | 5.3V | 3 | 2.4V | 3 | PS 15 PS |
| 4 | 5.3V/8.1V API ON / OFF | 4 | 0V | 4 | PS 16 PS |
| 5 | 9.2V/0V API ON / OFF | 5 | 2.4V | 5 | PS 17 — |
| 6 | — | 6 | 2.4V | 6 | — 18 PS |
| 7 | 0V | 7 | 4.4V | 7 | 4.8V 19 PS |
| 8 | 0V | 8 | 3.2V | 8 | 0V 20 4.9V |
| 9 | 0V | | | 9 | — 21 2.4V |
| 10 | 0V | IC405 | | 10 | 4.8V 22 2.4V |
| 11 | 0V | 1 | 5V | 11 | — 23 0V |
| 12 | — | 2 | PS | 12 | — 24 PS |
| 13 | 0V/8.1V API ON / OFF | 3 | 0V | | |
| 14 | 9.2V | 4 | 0V | | |

| IC104 | | | | IC105 | | | | IC402 | | | |
|-------|------|----|------|-------|------|----|----|-------|----|--|--|
| 1 | — | 9 | 0V | 1 | PS | 10 | — | 1 | 0V | | |
| 2 | PS | 10 | 0V | 2 | 0V | 11 | — | 2 | 0V | | |
| 3 | 2.4V | 11 | 0V | 3 | 0V | 12 | — | 3 | 0V | | |
| 4 | 2.4V | 12 | 4.8V | 4 | 4.7V | 13 | — | 4 | 0 | | |
| 5 | 4.8V | 13 | PS | 5 | PS | 14 | PS | 5 | 5V | | |
| 6 | 0V | 14 | PS | 6 | PS | 15 | PS | 6 | 5V | | |
| 7 | 2.4V | 15 | — | 7 | 0V | 16 | PS | 7 | 0V | | |
| 8 | 2.4V | 16 | PS | 8 | 0V | 17 | 0V | 8 | 5V | | |
| | | | | 9 | 4.8V | 18 | PS | | | | |

| IC401 | | | | | | | | | |
|-------|---------|-----------|--|----|------|----|----|----|------|
| 1 | P5 | | | 17 | 0V | 33 | 0V | 49 | 0V |
| 2 | P5 | | | 18 | 0V | 34 | 0V | 50 | 0V |
| 3 | P5 | | | 19 | 0V | 35 | 5V | 51 | 0V |
| 4 | P5 | | | 20 | 0V | 36 | 0V | 52 | 0V |
| 5 | P5 | | | 21 | 0V | 37 | P5 | 53 | 0V |
| 6 | P5 | | | 22 | 4.9V | 38 | P5 | 54 | 2.6V |
| 7 | P5 | | | 23 | 4.9V | 39 | 5V | 55 | 5V |
| 8 | 0V / OV | GRN / ORG | | 24 | 0V | 40 | 5V | 56 | 5V |
| 9 | 0V | | | 25 | 4.9V | 41 | 0V | 57 | P5 |
| 10 | 0V | | | 26 | 4.9V | 42 | P5 | 58 | 5V |
| 11 | 0V | | | 27 | P5 | 43 | 0V | 59 | P5 |
| 12 | 0V | | | 28 | P5 | 44 | — | 60 | — |
| 13 | 0V | | | 29 | P5 | 45 | 5V | 61 | P5 |
| 14 | 0V | | | 30 | P5 | 46 | 0V | 62 | 0V |
| 15 | 0V | | | 31 | 0V | 47 | 0V | 63 | P5 |
| 16 | 0V | | | 32 | 0V | 48 | 0V | 64 | P5 |

| | P5 | 17 | P5 | 33 | P5 | 49 | P5 |
|----|----|----|----|----|----|----|------|
| 2 | P5 | 18 | P5 | 34 | P5 | 50 | P5 |
| 3 | P5 | 19 | P5 | 35 | P5 | 51 | P5 |
| 4 | P5 | 20 | P5 | 36 | P5 | 52 | P5 |
| 5 | P5 | 21 | P5 | 37 | P5 | 53 | P5 |
| 6 | P5 | 22 | P5 | 38 | P5 | 54 | — |
| 7 | P5 | 23 | P5 | 39 | P5 | 55 | P5 |
| 8 | P5 | 24 | — | 40 | P5 | 56 | SV |
| 9 | P5 | 25 | P5 | 41 | P5 | 57 | P5 |
| 10 | P5 | 26 | P5 | 42 | P5 | 58 | 3 SV |
| 11 | P5 | 27 | P5 | 43 | P5 | 59 | SV |
| 12 | P5 | 28 | P5 | 44 | P5 | 60 | P5 |
| 13 | P5 | 29 | P5 | 45 | P5 | 61 | P5 |
| 14 | P5 | 30 | P5 | 46 | P5 | 62 | P5 |
| 15 | P5 | 31 | P5 | 47 | P5 | 63 | P5 |
| 16 | P5 | 32 | P5 | 48 | P5 | 64 | P5 |

| | E | C | B | MODE |
|------|------|------------|------------|-----------|
| Q102 | 0V | 0V/1.0V | 4.8V/0V | LW/OTHER |
| Q103 | 4.9V | 4.8V/0.5V | 4.2V/4.8V | FM/MW, LW |
| Q104 | 0V | 0V/4.9V | 8.6V/0.0V | FM/MW, LW |
| Q403 | 0V | 12.3V/0.1V | 0V/8.7V | GRN/ORG |
| Q404 | 0V | 0.1V/12.4V | 12.3V/0.1V | GRN/ORG |
| Q405 | 0V | 12.3V/0V | 0V/8.7V | GRN/ORG |
| Q406 | 0V | 12.3V/0.1V | 0V/8.7V | GRN/ORG |
| Q407 | 0V | 8.7V/0V | 0V/8.7V | GRN/ORG |
| Q408 | 0V | 0.1V/8.8V | 8.7V/0.1V | GRN/ORG |
| Q409 | 0V | 0.1V/12.4V | 12.3V/0.1V | GRN/ORG |
| Q410 | 0V | 0.1V/12.4V | 12.3V/0.1V | GRN/ORG |

| | 1 | 2 | 3 | 4 | 5 | MODE |
|------|-----------|-----------|-----------|-----------|---------|--------------|
| Q101 | 0V / 8.4V | 9.2V / 0V | 0V / 8.4V | 0V | 5V / 0V | API ON / OFF |
| Q402 | — | 0V / 8.7V | 8.8V | 0V / 4.9V | 0V | GRN / ORG |

<Measuring Conditions>

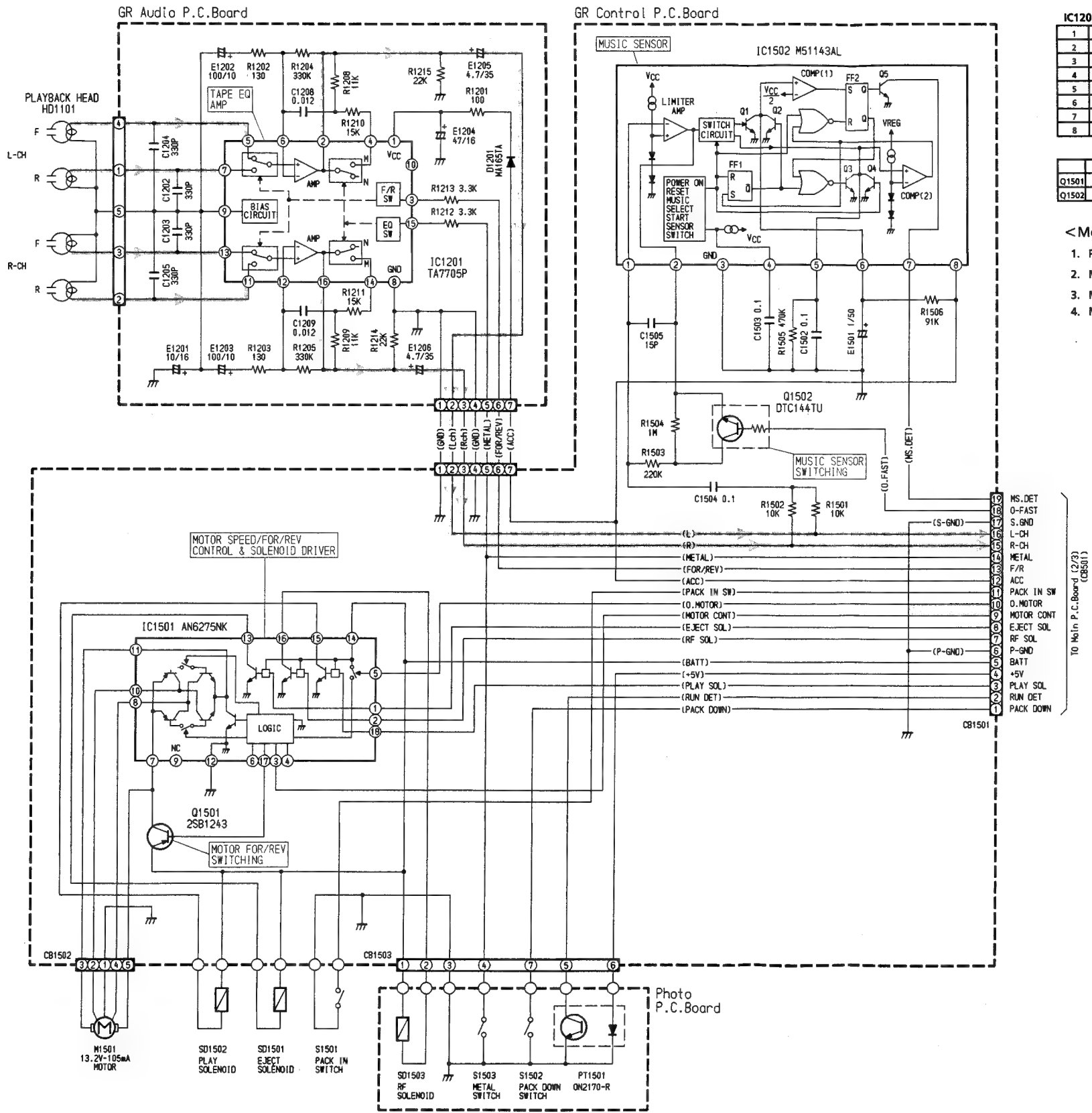
- | | |
|------------------------------|----------------------------|
| 1. Power Supply Voltage | : DC14.4V |
| 2. Measuring Meter | : Digital Multi Volt Meter |
| 3. Measuring Point Reference | : Between Ground |
| 4. Measuring Conditions | : No Signal Input |
| | FM 98.1MHz |
| | MW 999kHz |
| | LW 216kHz |
| | TAPE Blank |

| IC403 | | | | | | | | | |
|-------|----|----|-----------|------------|----|----|----|----|--|
| 1 | P5 | 21 | 1.8V/0.7V | LCD ON/OFF | 41 | P5 | 51 | P5 | |
| 2 | P5 | 22 | 3.2V | | 42 | — | 62 | P5 | |
| 3 | P5 | 23 | — | | 43 | — | 63 | P5 | |
| 4 | P5 | 24 | 0V/1.8V | LCD ON/OFF | 44 | — | 64 | P5 | |
| 5 | P5 | 25 | 1.5V/2.8V | LCD ON/OFF | 45 | — | 65 | P5 | |
| 6 | P5 | 26 | 1.5V/2.8V | LCD ON/OFF | 46 | P5 | 66 | P5 | |
| 7 | P5 | 27 | P5 | | 47 | P5 | 67 | P5 | |
| 8 | P5 | 28 | 0V | | 48 | P5 | 68 | P5 | |
| 9 | P5 | 29 | 0V | | 49 | P5 | 69 | P5 | |
| 10 | P5 | 30 | — | | 50 | P5 | 70 | P5 | |
| 11 | P5 | 31 | — | | 51 | P5 | 71 | P5 | |
| 12 | P5 | 32 | P5 | | 52 | P5 | 72 | P5 | |
| 13 | P5 | 33 | 5V | | 53 | P5 | 73 | P5 | |
| 14 | P5 | 34 | 0V | | 54 | P5 | 74 | P5 | |
| 15 | P5 | 35 | P5 | | 55 | P5 | 75 | P5 | |
| 16 | P5 | 36 | P5 | | 56 | P5 | 76 | P5 | |
| 17 | P5 | 37 | 0V | | 57 | P5 | 77 | P5 | |
| 18 | P5 | 38 | 0V | | 58 | P5 | 78 | P5 | |
| 19 | P5 | 39 | P5 | | 59 | P5 | 79 | P5 | |
| 20 | P5 | 40 | 0V | | 60 | P5 | 80 | P5 | |

Schematic Diagram (5/5)

NOTES:
 1. All resistance values are in ohms. K = 1,000
 2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

| IC | IC1501 | IC1201 | IC1502 |
|----------------|--------|--------|--------|
| Transistor (Q) | Q1501 | | Q1502 |



| IC1201 | | | | IC1501 | | | | IC1502 | | | |
|--------|-------|----|------|--------|-------|----|-------|--------|--------|--|--|
| 1 | 13.1V | 9 | 2.9V | 1 | 0V | 10 | 13.9V | 1 | 1.41V | | |
| 2 | 3.1V | 10 | — | 2 | 0V | 11 | 8.1V | 2 | 1.38V | | |
| 3 | 4.9V | 11 | 2.9V | 3 | 5.1V | 12 | 0V | 3 | 0V | | |
| 4 | 3.1V | 12 | 2.9V | 4 | 0V | 13 | 14V | 4 | 1.31V | | |
| 5 | 2.9V | 13 | 2.9V | 5 | 5.1V | 14 | 14V | 5 | 0.02V | | |
| 6 | 2.9V | 14 | 3.1V | 6 | — | 15 | 0.2V | 6 | 0.02V | | |
| 7 | 2.9V | 15 | 0.1V | 7 | 13.9V | 16 | 14V | 7 | 0.05V | | |
| 8 | 0V | 16 | 3.1V | 8 | 8.2V | 17 | 13.2V | 8 | 14.01V | | |
| | | | | 9 | N.C. | 18 | 5.1V | | | | |

| | E | C | B |
|-------|-------|-------|-------|
| Q1501 | 14V | 13.9V | 13.2V |
| Q1502 | 1.38V | 1.4V | 0V |

<Measuring Conditions>

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Volt Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input
 - FM : 98.1MHz
 - MW : 999kHz
 - LW : 216kHz
 - TAPE : Blank

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μ F=microfarads, pF=picofarads

| Abbreviations | | | Symbol No. | Part No. | Description |
|-------------------------------------|---|--|-------------|-------------|-----------------|
| RES.= Resistor | CAP.= Capacitor | | Transistors | | |
| C.F.= Carbon Film | ELY.= Electrolytic | | | | |
| M.F.= Metal Film | CER.= Ceramic | | | | |
| M.O.= Metal Oxide Film | MYL.= Mylar | | | | |
| M.P.= Metal Plate | TAN.= Tantalum | | | | |
| TR.= Transistor | POLY.= Polystyrol | | | | |
| TRANS.= Transformer | PP.= Polypropylene | | | | |
| CP.= Chip | PLT.= Polyethylene | | | | |
| | PF.= Polyester Film | | | | |
| | | | | | |
| Symbol No. | Part No. | Description | | | |
| Main P. C. Board | | | | | |
| IC's | | | | | |
| IC002 or IC003 | 51T65379F12 51T65379F22 51T55352W02 | BA4558F XRA4558FH TC4W66F | Q004 | 48T62966F03 | CP., DTA124 |
| IC201 | 51T25767W02 | CXA1332M | Q005 | 48T62967F03 | CP., DTC124K |
| IC202 | 51T40941U02 | MC14066BFEL | Q006 | 48T62967F03 | CP., DTC124K |
| | | | Q008 | 48T73888F08 | CP., FMG1 |
| | | | Q009 | 48T73888F08 | CP., FMG1 |
| IC203 or IC204 | 51T25154W21 51T25154W11 51T72016F02 | XRA15532F BA15532F LC7537AN | Q011 | 48T62967F09 | CP., DTC114TK |
| IC205 | 51T25576W04 | NJM4580E | Q201 | 48T94471F03 | CP., IMH1 |
| IC206 | 51T25576W04 | NJM4580E | Q202 | 48T94471F03 | CP., IMH1 |
| | | | Q203 | 48T73888F08 | CP., FMG1 |
| IC207 | 51T25576W04 | NJM4580E | Q301 | 48T63788F04 | CP., 2SD1328 |
| IC301 | 51T25576W04 | NJM4580E | Q302 | 48T63788F04 | CP., 2SD1328 |
| IC302 | 51T25576W04 | NJM4580E | Q303 | 48T63788F04 | CP., 2SD1328 |
| IC304 or | 51T25154W11 51T25154W21 | BA15532F XRA15532F | Q304 | 48T63788F04 | CP., 2SD1328 |
| IC501 | 51T55433W08 | 55433W08 | Q501 | 48T80674F01 | FET, CP. 2SK621 |
| IC502 | 51T95014F13 | S-8052HNM-CR | Q502 | 48T62967F03 | CP., DTC124K |
| IC504 | 51T45258W02 | 45258W02 | Q503 | 48T62966F03 | CP., DTA124 |
| IC505 | 51T93532F04 | TS4S81F | Q504 | 48T62967F03 | CP., DTC124K |
| IC506 | 51T84723F02 | LC3516AML | Q505 | 48T73888F12 | CP., FMC2 |
| | | | Q507 | 48T73888F12 | CP., FMC2 |
| IC507 | 51T55640W01 | MC74HC373AFE | Q508 | 48T63420F01 | CP., 2SA1037K |
| IC508 | 51T25370W01 | MC14538BFEL | Q509 | 48T62967F03 | CP., DTC124K |
| IC509 | 51T93332F01 | NJM2903M | Q510 | 48T73888F08 | CP., FMG1 |
| IC510 | 51T55070W04 | MB88385APF | Q511 | 48T62967F03 | CP., DTC124K |
| IC511 | 51T55638W01 | μ PD4990AG | Q512 | 48T62967F08 | CP., DTC144W |
| | | | Q801 | 48T62967F06 | CP., DTC114YK |
| IC701 or IC702 or IC801 | 51T65379F12 51T65379F22 51T16239W12 51T16239W22 51T15268W03 | BA4558FH XRA4558FH BA14741F XRA14741F L78LR05DFA | Q802 | 48T62966F03 | CP., DTA124 |
| IC802 or IC803 | 51T93333F01 51T65379F12 51T65379F22 | NJM2904M BA4558FH XRA4558FH | Q803 | 48T73888F12 | CP., FMC2 |
| | | | Q804 | 48T84366F01 | 2SB1243 |
| | | | Q805 | 48T62967F03 | CP., DTC124K |
| | | | Q806 | 48T84366F01 | 2SB1243 |
| | | | Q807 | 48T62967F03 | CP., DTC124K |
| | | | Q808 | 48T63420F01 | CP., 2SA1037K |
| | | | Q809 | 48T62967F03 | CP., DTC124K |
| | | | Q810 | 48T73888F12 | CP., FMC2 |
| | | | Q811 | 48T84366F01 | 2SB1243 |
| | | | Q812 | 48T62967F03 | CP., DTC124K |
| | | | Q813 | 48T69176F01 | 2SC3421 |
| | | | Q814 | 48T25169W01 | 2SD2096 |
| | | | Q815 | 48T69177F01 | 2SA1358 |
| | | | Q816 | 48T73888F12 | CP., FMC2 |
| | | | Q817 | 48T55057W01 | 2SD1857 |
| | | | Q818 | 48T62967F03 | CP., DTC124K |
| | | | Q819 | 48T84234F03 | 2SB1238 |
| | | | Q820 | 48T84234F03 | 2SB1238 |
| | | | Q821 | 48T62967F03 | CP., DTC124K |
| | | | Q822 | 48T15289W03 | 2SD2008 |
| | | | Q823 | 48T93828F01 | 2SD1994A |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|------------|-------------|-----------------------------|------------|-------------|--------------------------|
| Q824 | 48T63417F01 | CP., 2SC2412K | Coil | | |
| Q825 | 48T63417F01 | CP., 2SC2412K | L501 | 24T16403W19 | Inductor, 2.2 μ H |
| Q826 | 48T73888F12 | CP., FMC2 | Crystals | | |
| Q828 | 48T62967F03 | CP., DTC124K | X501 | 91T45118W47 | 8MHz |
| | | | X502 | 91T45118W44 | 7.3728MHz |
| | | | X503 | 91T15849W02 | 32.768KHz |
| | | | X504 | 91T45118W12 | 4MHz |
| Diodes | | | Capacitors | | |
| D002 | 48T68828F11 | 1SS133 | E005 | 23S61523F25 | ELY., 0.1 μ F / 50V |
| D301 | 48T63463F01 | CP., DAP202K | E007 | 23S61523F25 | ELY., 0.1 μ F / 50V |
| D302 | 48T63463F01 | CP., DAP202K | E008 | 23S61523F28 | ELY., 0.47 μ F / 50V |
| D501 | 48T68828F11 | 1SS133 | E010 | 23S61523F28 | ELY., 0.47 μ F / 50V |
| D502 | 48T68828F11 | 1SS133 | C015 | 08S65128F69 | CP., 0.01 μ F |
| D503 | 48T63462F01 | CP., DAN202K | C016 | 08S65128F35 | CP., 100pF |
| D504 | 48T63462F01 | CP., DAN202K | C017 | 08S65128F69 | CP., 0.01 μ F |
| D505 | 48T70933F11 | 1SS136 | E017 | 23T25149W05 | ELY., 1 μ F / 50V |
| D506 | 48T63462F01 | CP., DAN202K | C018 | 08T15399W01 | CP., 0.022 μ F |
| D507 | 48T68828F11 | 1SS133 | E018 | 23T25149W05 | ELY., 1 μ F / 50V |
| D508 | 48T63463F01 | CP., DAP202K | E019 | 23S61523F34 | ELY., 100 μ F / 10V |
| D701 | 48T64134F01 | CP., DA204K | C020 | 08S65128F69 | CP., 0.01 μ F |
| D702 | 48T64134F01 | CP., DA204K | C025 | 08S65128F62 | CP., 2700pF |
| D703 | 48T64134F01 | CP., DA204K | C026 | 08S65128F68 | CP., 8200pF |
| D807 | 48T84052F11 | 11ES2 | C027 | 08T15399W01 | CP., 0.022 μ F |
| D808 | 48T64134F01 | CP., DA204K | C028 | 08T15399W01 | CP., 0.022 μ F |
| D809 | 48T68828F11 | 1SS133 | C029 | 08S53332F47 | CP., 0.01 μ F |
| D810 | 48T81044F01 | 10E2 | C030 | 08S65128F69 | CP., 0.01 μ F |
| D811 | 48T64134F01 | CP., DA204K | C036 | 08S65128F35 | CP., 100pF |
| D812 | 48T84052F11 | 11ES2 | C038 | 08S65128F35 | CP., 100pF |
| D813 | 48T84052F11 | 11ES2 | C039 | 08S65128F43 | CP., 220pF |
| ZD001 | 48T25766W24 | Zener, HZS9C1L | C041 | 08T15399W01 | CP., 0.022 μ F |
| ZD501 | 48T45012W35 | Zener, MTZJ7.5A | C042 | 08S65128F35 | CP., 100pF |
| ZD502 | 48T45012W35 | Zener, MTZJ7.5A | C045 | 08T15807W05 | CP., 0.1 μ F |
| ZD503 | 48T45012W29 | Zener, MTZJ6.2A | C046 | 08S65128F69 | CP., 0.01 μ F |
| ZD801 | 48T45012W26 | Zener, MTZJ5.6A | C201 | 08T55401W17 | CP., 2200pF |
| ZD802 | 48T25766W22 | Zener, HZS9B2L | E201 | 23T25149W05 | ELY., 1 μ F / 50V |
| ZD804 | 48T25766W20 | Zener, HZS9A2L | C202 | 08T55401W17 | CP., 2200pF |
| ZD805 | 48T45012W54 | Zener, MTZJ13A | E202 | 23T25149W05 | ELY., 1 μ F / 50V |
| ZD806 | 48T25766W24 | Zener, HZS9C1L | C203 | 08T55401W17 | CP., 2200pF |
| ZD807 | 48T25766W01 | Zener, HZS6A1L | E203 | 23T25149W09 | ELY., 10 μ F / 16V |
| Switch | | | C204 | 08T55401W17 | CP., 2200pF |
| S501 | 40T16096W01 | Switch Tact, SKHHLW (RESET) | E204 | 23T25149W09 | ELY., 10 μ F / 16V |
| Microphone | | | E205 | 23T25149W03 | ELY., 0.33 μ F / 50V |
| MC701 | 50T35317W02 | WM-0548Y | E206 | 23T25149W03 | ELY., 0.33 μ F / 50V |
| | | | C207 | 08S82122F13 | CP., 10pF |
| | | | E207 | 23T25149W09 | ELY., 10 μ F / 16V |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|------------|-------------|--------------------|------------|-------------|--------------------|
| C208 | 08S82122F13 | CP., 10pF | E501 | 23S61523F34 | ELY., 100µF / 10V |
| E208 | 23T25149W05 | ELY., 1µF / 50V | C502 | 08S82122F21 | CP., 22pF |
| C209 | 08S82122F13 | CP., 10pF | E502 | 23S61523F12 | ELY., 10µF / 16V |
| E209 | 23T25149W05 | ELY., 1µF / 50V | C503 | 08T15399W01 | CP., 0.022µF |
| C210 | 08S82122F13 | CP., 10pF | E503 | 23S61523F34 | ELY., 100µF / 10V |
| E210 | 23T25149W09 | ELY., 10µF / 16V | C504 | 08S65128F69 | CP., 0.01µF |
| C211 | 08T55401W17 | CP., 2200pF | E504 | 23S61523F34 | ELY., 100µF / 10V |
| E211 | 23T25149W09 | ELY., 10µF / 16V | C505 | 08S82122F23 | CP., 27pF |
| C212 | 08T55401W17 | CP., 2200pF | E505 | 23S61523F34 | ELY., 100µF / 10V |
| E212 | 23T25149W09 | ELY., 10µF / 16V | C506 | 08S82122F23 | CP., 27pF |
| C213 | 08T15559W26 | TF, 0.12µF | E506 | 23S61523F34 | ELY., 100µF / 10V |
| E213 | 23T25149W09 | ELY., 10µF / 16V | C507 | 08T15399W01 | CP., 0.022µF |
| C214 | 08T15559W26 | TF, 0.12µF | E507 | 23S61523F34 | ELY., 100µF / 10V |
| E214 | 23T25149W09 | ELY., 10µF / 16V | C508 | 08S65128F35 | CP., 100pF |
| C215 | 08T15559W26 | TF, 0.12µF | E508 | 23T25149W12 | ELY., 47µF / 16V |
| E215 | 23T25149W09 | ELY., 10µF / 16V | C509 | 08S65128F35 | CP., 100pF |
| C216 | 08T15559W26 | TF, 0.12µF | C510 | 08S65128F35 | CP., 100pF |
| E216 | 23T25149W09 | ELY., 10µF / 16V | C511 | 08S65128F35 | CP., 100pF |
| C217 | 08T55401W17 | CP., 2200pF | E511 | 23S61523F27 | ELY., 0.33µF / 50V |
| E217 | 23T25149W04 | ELY., 0.47µF / 50V | C512 | 08T15399W03 | CP., 0.047µF |
| C218 | 08T55401W17 | CP., 2200pF | C513 | 08T15399W01 | CP., 0.022µF |
| E218 | 23T25149W04 | ELY., 0.47µF / 50V | C514 | 08T15807W05 | CP., 0.1µF |
| E219 | 23T25149W09 | ELY., 10µF / 16V | C515 | 08T15807W05 | CP., 0.1µF |
| E220 | 23T25149W05 | ELY., 1µF / 50V | C516 | 08S65128F35 | CP., 100pF |
| E221 | 23T25149W09 | ELY., 10µF / 16V | C517 | 08S65128F69 | CP., 0.01µF |
| E222 | 23T25149W09 | ELY., 10µF / 16V | C518 | 08S65128F69 | CP., 0.01µF |
| E223 | 23T25149W05 | ELY., 1µF / 50V | C519 | 08S82122F21 | CP., 22pF |
| E224 | 23T25149W05 | ELY., 1µF / 50V | C520 | 08S82122F20 | CP., 20pF |
| E225 | 23T25149W02 | ELY., 0.22µF / 50V | C522 | 08S65128F69 | CP., 0.01µF |
| E226 | 23T25149W02 | ELY., 0.22µF / 50V | C523 | 08S65128F69 | CP., 0.01µF |
| E227 | 23T25149W03 | ELY., 0.33µF / 50V | C524 | 08S65128F35 | CP., 100pF |
| E228 | 23T25149W03 | ELY., 0.33µF / 50V | C529 | 08S65128F35 | CP., 100pF |
| C301 | 08S82122F13 | CP., 10pF | C532 | 08S65128F69 | CP., 0.01µF |
| E301 | 23T25149W05 | ELY., 1µF / 50V | C538 | 08S65128F35 | CP., 100pF |
| C302 | 08S82122F13 | CP., 10pF | C539 | 08S65128F43 | CP., 220pF |
| E302 | 23T25149W05 | ELY., 1µF / 50V | C540 | 08S65128F69 | CP., 0.01µF |
| C303 | 08S82122F13 | CP., 10pF | C541 | 08S65128F35 | CP., 100pF |
| E303 | 23T25149W05 | ELY., 1µF / 50V | C542 | 08S65128F35 | CP., 100pF |
| C304 | 08S82122F13 | CP., 10pF | C544 | 08S65128F35 | CP., 100pF |
| E304 | 23T25149W05 | ELY., 1µF / 50V | C545 | 08S65128F69 | CP., 0.01µF |
| E305 | 23T25149W09 | ELY., 10µF / 16V | C547 | 08S65128F35 | CP., 100pF |
| E306 | 23T25149W09 | ELY., 10µF / 16V | C549 | 08T15399W02 | CP., 0.033µF |
| E307 | 23T25149W09 | ELY., 10µF / 16V | C550 | 08S65128F63 | CP., 3300µF |
| E308 | 23T25149W09 | ELY., 10µF / 16V | C553 | 08S65128F35 | CP., 100pF |
| E309 | 23T25149W05 | ELY., 1µF / 50V | C554 | 08S65128F35 | CP., 100pF |
| E310 | 23T25149W05 | ELY., 1µF / 50V | C555 | 08S82122F19 | CP., 18pF |
| E316 | 23T25149W05 | ELY., 1µF / 50V | C556 | 08S82122F19 | CP., 18pF |
| E317 | 23T25149W09 | ELY., 10µF / 16V | C701 | 08S65128F61 | CP., 2200pF |
| E318 | 23T25149W09 | ELY., 10µF / 16V | E701 | 23S61523F29 | ELY., 1µF / 50V |
| E319 | 23T25149W09 | ELY., 10µF / 16V | C702 | 08S65128F69 | CP., 0.01µF |
| E320 | 23T25149W09 | ELY., 10µF / 16V | E702 | 23S61523F30 | ELY., 2.2µF / 50V |
| C501 | 08S82122F21 | CP., 22pF | C703 | 08T15399W02 | CP., 0.033µF |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|---|-------------|--------------------------|------------|-------------|--------------|
| E703 | 23S61523F12 | ELY., 10 μ F / 16V | R026 | 06S64995F77 | 10K ohm |
| C704 | 08S65128F69 | CP., 0.01 μ F | R027 | 06S64996F04 | 120K ohm |
| E704 | 23S61523F12 | ELY., 10 μ F / 16V | R028 | 06S64995F77 | 10K ohm |
| C705 | 08T15807W05 | CP., 0.1 μ F | R030 | 06S64995F53 | 1K ohm |
| E705 | 23S61523F12 | ELY., 10 μ F / 16V | R032 | 06S64995F93 | 47K ohm |
| C706 | 08S65128F35 | CP., 100pF | R033 | 06S64995F93 | 47K ohm |
| E706 | 23S61523F12 | ELY., 10 μ F / 16V | R036 | 06S64995F77 | 10K ohm |
| C707 | 08S65128F61 | CP., 2200pF | R037 | 06S64995F77 | 10K ohm |
| E707 | 23S61523F12 | ELY., 10 μ F / 16V | R041 | 06S64995F77 | 10K ohm |
| C708 | 08T15399W01 | CP., 0.022 μ F | R042 | 06S64995F77 | 10K ohm |
| E708 | 23S61523F12 | ELY., 10 μ F / 16V | R043 | 06S64996F04 | 120K ohm |
| E709 | 23S61523F12 | ELY., 10 μ F / 16V | R044 | 06S64995F77 | 10K ohm |
| E710 | 23S61523F34 | ELY., 100 μ F / 10V | R045 | 06S64995F77 | 10K ohm |
| E711 | 23S61523F12 | ELY., 10 μ F / 16V | R046 | 06S64995F69 | 4.7K ohm |
| C801 | 08S65128F69 | CP., 0.01 μ F | R047 | 06S64995F69 | 4.7K ohm |
| E801 | 23S61523F25 | ELY., 0.1 μ F / 50V | R060 | 06S70072F41 | 330 ohm 1/4W |
| C802 | 08T15399W03 | CP., 0.047 μ F | R066 | 06S64995F77 | 10K ohm |
| E802 | 23S61523F12 | ELY., 10 μ F / 16V | R201 | 06S64995F37 | 220 ohm |
| C803 | 08S65128F69 | CP., 0.01 μ F | R202 | 06S64995F37 | 220 ohm |
| E803 | 23T35505W02 | ELY., 2200 μ F / 16V | R203 | 06S64995F86 | 24K ohm |
| C804 | 08S65128F57 | CP., 1000pF | R204 | 06S64995F86 | 24K ohm |
| E804 | 23T00149L28 | ELY., 470 μ F / 16V | R205 | 06S64995F47 | 560 ohm |
| C805 | 08T15399W01 | CP., 0.022 μ F | R206 | 06S64995F47 | 560 ohm |
| E805 | 23T25149W15 | ELY., 4.7 μ F / 35V | R207 | 06S64995F53 | 1K ohm |
| C806 | 08T15399W01 | CP., 0.022 μ F | R208 | 06S64995F87 | 27K ohm |
| E806 | 23T35150W31 | ELY., 100 μ F / 50V | R209 | 06S64995F81 | 15K ohm |
| C807 | 08T15399W01 | CP., 0.022 μ F | R210 | 06S64995F81 | 15K ohm |
| E807 | 23T25149W05 | ELY., 1 μ F / 50V | R211 | 06S64995F77 | 10K ohm |
| E809 | 23S61523F12 | ELY., 10 μ F / 16V | R212 | 06S64995F77 | 10K ohm |
| E810 | 23S61523F34 | ELY., 100 μ F / 10V | R213 | 06S64995F79 | 12K ohm |
| E811 | 23T94181F40 | ELY., 220 μ F / 10V | R214 | 06S64995F75 | 8.2K ohm |
| E812 | 23S61523F12 | ELY., 10 μ F / 16V | R215 | 06S64995F79 | 12K ohm |
| E813 | 23T25149W05 | ELY., 1 μ F / 50V | R216 | 06S64995F75 | 8.2K ohm |
| E814 | 23T25149W05 | ELY., 1 μ F / 50V | R217 | 06S64995F61 | 2.2K ohm |
| | | | R218 | 06S64995F85 | 22K ohm |
| | | | R219 | 06S64995F85 | 22K ohm |
| | | | R220 | 06S64995F85 | 22K ohm |
| | | | R221 | 06S64995F85 | 22K ohm |
| | | | R222 | 06S64995F85 | 22K ohm |
| | | | R223 | 06S64995F53 | 1K ohm |
| | | | R224 | 06S64995F85 | 22K ohm |
| | | | R225 | 06S64995F85 | 22K ohm |
| | | | R226 | 06S64995F77 | 10K ohm |
| | | | R227 | 06S64995F77 | 10K ohm |
| | | | R228 | 06S64995F63 | 2.7K ohm |
| | | | R229 | 06S64995F63 | 2.7K ohm |
| | | | R230 | 06S64996F26 | 1M ohm |
| | | | R231 | 06S64996F26 | 1M ohm |
| | | | R232 | 06S64996F26 | 1M ohm |
| | | | R233 | 06S64996F26 | 1M ohm |
| | | | R234 | 06S64996F26 | 1M ohm |
| Resistors (All resistors are chip 1/10W \pm 5% unless otherwise noted.) | | | | | |
| R016 | 06S64996F02 | 100K ohm | | | |
| R017 | 06S64995F69 | 4.7K ohm | | | |
| R018 | 06S64996F22 | 680K ohm | | | |
| R019 | 06S64996F14 | 330K ohm | | | |
| R020 | 06S64995F29 | 100 ohm | | | |
| R021 | 06S64995F53 | 1K ohm | | | |
| R023 | 06S64995F77 | 10K ohm | | | |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|------------|-------------|-------------|------------|-------------|---------------|
| R235 | 06S64996F26 | 1M ohm | R512 | 06S64995F93 | 47K ohm |
| R236 | 06S64995F93 | 47K ohm | R514 | 06S64995F85 | 22K ohm |
| R237 | 06S64996F30 | 2.2M ohm | R515 | 06S64995F79 | 12K ohm |
| R238 | 06S64996F30 | 2.2M ohm | R516 | 06S64995F61 | 2.2K ohm |
| R239 | 06S64996F30 | 2.2M ohm | R517 | 06S64995F93 | 47K ohm |
| R248 | 06S64996F30 | 2.2M ohm | R518 | 06S64995F93 | 47K ohm |
| R301 | 06S64995F67 | 3.9K ohm | R519 | 06S64995F93 | 47K ohm |
| R302 | 06S64995F67 | 3.9K ohm | R520 | 06S64995F93 | 47K ohm |
| R303 | 06S64995F67 | 3.9K ohm | R521 | 06S64995F93 | 47K ohm |
| R304 | 06S64995F67 | 3.9K ohm | R522 | 06S64995F93 | 47K ohm |
| R305 | 06S64996F02 | 100K ohm | R523 | 06S64995F53 | 1K ohm |
| R306 | 06S64996F02 | 100K ohm | R524 | 06S64996F02 | 100K ohm |
| R307 | 06S64996F02 | 100K ohm | R525 | 06S64995F93 | 47K ohm |
| R308 | 06S64996F02 | 100K ohm | R526 | 06S64995F93 | 47K ohm |
| R309 | 06S64995F83 | 18K ohm | R527 | 06S64995F93 | 47K ohm |
| R310 | 06S64995F83 | 18K ohm | R528 | 06S64995F93 | 47K ohm |
| R311 | 06S64995F83 | 18K ohm | R529 | 06S64995F77 | 10K ohm |
| R312 | 06S64995F83 | 18K ohm | R531 | 06S64995F85 | 22K ohm |
| R313 | 06S64995F37 | 220 ohm | R532 | 06S64995F85 | 22K ohm |
| R314 | 06S64995F37 | 220 ohm | R533 | 06S64995F77 | 10K ohm |
| R315 | 06S64995F37 | 220 ohm | R534 | 06S64995F77 | 10K ohm |
| R316 | 06S64995F37 | 220 ohm | R535 | 06S64995F77 | 10K ohm |
| R317 | 06S64995F93 | 47K ohm | R536 | 06S70072F61 | 2.2K ohm 1/4W |
| R318 | 06S64995F93 | 47K ohm | R537 | 06S64995F89 | 33K ohm |
| R319 | 06S64995F93 | 47K ohm | R538 | 06S64995F53 | 1K ohm |
| R320 | 06S64995F93 | 47K ohm | R539 | 06S64995F53 | 1K ohm |
| R321 | 06S64995F29 | 100 ohm | R540 | 06S70072F19 | 39 ohm 1/4W |
| R322 | 06S64995F29 | 100 ohm | R541 | 06S70072F19 | 39 ohm 1/4W |
| R323 | 06S64995F29 | 100 ohm | R542 | 06S70072F19 | 39 ohm 1/4W |
| R324 | 06S64995F29 | 100 ohm | R543 | 06S70072F19 | 39 ohm 1/4W |
| R325 | 06S64995F77 | 10K ohm | R545 | 06S64995F53 | 1K ohm |
| R326 | 06S64995F77 | 10K ohm | R547 | 06S64995F53 | 1K ohm |
| R327 | 06S64995F77 | 10K ohm | R548 | 06S64995F53 | 1K ohm |
| R328 | 06S64995F77 | 10K ohm | R549 | 06S64995F53 | 1K ohm |
| R343 | 06S64995F85 | 22K ohm | R550 | 06S64995F53 | 1K ohm |
| R344 | 06S64995F85 | 22K ohm | R551 | 06S64995F77 | 10K ohm |
| R345 | 06S64995F85 | 22K ohm | R552 | 06S64996F26 | 1M ohm |
| R346 | 06S64995F85 | 22K ohm | R553 | 06S64996F14 | 330K ohm |
| R347 | 06S64995F85 | 22K ohm | R554 | 06S64996F18 | 470K ohm |
| R348 | 06S64995F85 | 22K ohm | R555 | 06S64995F05 | 10 ohm |
| R349 | 06S64995F85 | 22K ohm | R556 | 06S64995F75 | 8.2K ohm |
| R350 | 06S64995F85 | 22K ohm | R557 | 06S64995F93 | 47K ohm |
| R501 | 06S64995F41 | 330 ohm | R558 | 06S64995F61 | 2.2K ohm |
| R502 | 06S64995F89 | 33K ohm | R559 | 06S64995F57 | 1.5K ohm |
| R503 | 06S64995F93 | 47K ohm | R560 | 06S64995F93 | 47K ohm |
| R504 | 06S64995F93 | 47K ohm | R561 | 06S64995F77 | 10K ohm |
| R505 | 06S64995F93 | 47K ohm | R563 | 06S64995F93 | 47K ohm |
| R506 | 06S64995F93 | 47K ohm | R564 | 06S64995F77 | 10K ohm |
| R507 | 06S64995F69 | 4.7K ohm | R565 | 06S64995F93 | 47K ohm |
| R508 | 06S64995F69 | 4.7K ohm | R567 | 06S64995F69 | 4.7K ohm |
| R509 | 06S64995F93 | 47K ohm | R568 | 06S64995F85 | 22K ohm |
| R510 | 06S64995F61 | 2.2K ohm | R569 | 06S64995F61 | 2.2K ohm |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|------------|-------------|---------------|-------------------|-------------|-------------------|
| R570 | 06S64995F57 | 1.5K ohm | R819 | 06S70072F53 | 1K ohm 1/4W |
| R571 | 06S64995F93 | 47K ohm | R820 | 06S70072F45 | 470 ohm 1/4W |
| R572 | 06S64995F77 | 10K ohm | R821 | 06S70072F45 | 470 ohm 1/4W |
| R573 | 06S64995F81 | 15K ohm | R822 | 06S70072F53 | 1K ohm 1/4W |
| R574 | 06S64995F87 | 27K ohm | R823 | 06S64995F76 | 9.1K ohm |
| R575 | 06S64995F77 | 10K ohm | R824 | 06S70072F41 | 330 ohm 1/4W |
| R576 | 06S64995F77 | 10K ohm | R826 | 06S70072F45 | 470 ohm 1/4W |
| R577 | 06S64995F93 | 47K ohm | R827 | 06S64995F55 | 1.2K ohm |
| R578 | 06S64995F93 | 47K ohm | R828 | 06S64995F67 | 3.9K ohm |
| R701 | 06S64995F61 | 2.2K ohm | R829 | 06S64996F02 | 100K ohm |
| R702 | 06S64996F18 | 470K ohm | R830 | 06S64996F02 | 100K ohm |
| R703 | 06S64995F61 | 2.2K ohm | R831 | 06S64995F67 | 3.9K ohm |
| R704 | 06S64996F02 | 100K ohm | R832 | 06S64995F93 | 47K ohm |
| R705 | 06S64996F14 | 330K ohm | R833 | 06S64995F65 | 3.3K ohm |
| R706 | 06S64995F53 | 1K ohm | R834 | 06S64995F65 | 3.3K ohm |
| R707 | 06S64995F29 | 100 ohm | R835 | 06S70072F61 | 2.2K ohm 1/4W |
| R708 | 06S64996F02 | 100K ohm | R836 | 06S64995F77 | 10K ohm |
| R709 | 06S64995F69 | 4.7K ohm | R837 | 06S70072F53 | 1K ohm 1/4W |
| R710 | 06S64995F93 | 47K ohm | R838 | 06S70072F53 | 1K ohm 1/4W |
| R711 | 06S64995F77 | 10K ohm | R839 | 06S64995F89 | 33K ohm |
| R712 | 06S64996F02 | 100K ohm | R840 | 06S70072F39 | 270 ohm 1/4W |
| R713 | 06S64995F53 | 1K ohm | R841 | 06S53330F77 | 10K ohm 1/8W |
| R714 | 06S64995F29 | 100 ohm | R842 | 06S70072F61 | 2.2K ohm 1/4W |
| R715 | 06S64996F02 | 100K ohm | R850 | 06S64995F77 | 10K ohm |
| R716 | 06S64996F02 | 100K ohm | VR201 | 18T55256W13 | Variable, 10K ohm |
| R717 | 06S64995F67 | 3.9K ohm | VR202 | 18T55256W13 | Variable, 10K ohm |
| R718 | 06S64996F18 | 470K ohm | Front P. C. Board | | |
| R719 | 06S64995F69 | 4.7K ohm | IC's | | |
| R720 | 06S64995F77 | 10K ohm | IC401 | 51T45552W28 | 45552W28 |
| R721 | 06S64995F93 | 47K ohm | IC402 | 51T45623W02 | X24LC04SI |
| R722 | 06S64996F02 | 100K ohm | IC403 | 51T35265W02 | 35265W02 |
| R723 | 06S64995F53 | 1K ohm | IC404 | 51T83905F03 | LC7582W |
| R724 | 06S64995F29 | 100 ohm | IC405 | 51T55639W01 | RS31 |
| R725 | 06S64996F02 | 100K ohm | Transistors | | |
| R726 | 06S64995F89 | 33K ohm | Q402 | 48T73888F12 | CP., FMC2 |
| R727 | 06S64995F81 | 15K ohm | Q403 | 48T94853F08 | CP., DTD143TK |
| R802 | 06S53330F93 | 47K ohm 1/8W | Q404 | 48T94853F08 | CP., DTD143TK |
| R803 | 06S64995F93 | 47K ohm | Q405 | 48T94853F08 | CP., DTD143TK |
| R804 | 06S70072F39 | 270 ohm 1/4W | Q406 | 48T94853F08 | CP., DTD143TK |
| R805 | 06S64995F77 | 10K ohm | Q407 | 48T94853F08 | CP., DTD143TK |
| R806 | 06S70072F55 | 1.2K ohm 1/4W | Q408 | 48T94853F08 | CP., DTD143TK |
| R807 | 06S53330F77 | 10K ohm 1/8W | Q409 | 48T94853F08 | CP., DTD143TK |
| R808 | 06S64995F77 | 10K ohm | Q410 | 48T94853F08 | CP., DTD143TK |
| R809 | 06S70072F55 | 1.2K ohm 1/4W | | | |
| R811 | 06S70072F03 | 6.8 ohm 1/4W | | | |
| R812 | 06S70072F03 | 6.8 ohm 1/4W | | | |
| R813 | 06S70072F03 | 6.8 ohm 1/4W | | | |
| R814 | 06S64995F77 | 10K ohm | | | |
| R815 | 06S64995F77 | 10K ohm | | | |
| R816 | 06S53330F61 | 2.2K ohm 1/8W | | | |
| R817 | 06S64995F77 | 10K ohm | | | |
| R818 | 06S64995F77 | 10K ohm | | | |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|-----------------|-------------|-------------------------------|--|-------------|-------------------|
| Diodes | | | Coils | | |
| D401 | 48T81063F01 | CP., MA159 | L401 | 24T16403W19 | Inductor, 2.2μH |
| D402 | 48T81063F01 | CP., MA159 | L402 | 24T16403W19 | Inductor, 2.2μH |
| D403 | 48T63463F01 | CP., DAP202K | Thermistor | | |
| ZD401 | 48T62934F22 | CP., RD5.6MB2 | TH401 | 48T35484W05 | 10K ohm |
| ZD402 | 48T62934F22 | CP., RD5.6MB2 | Crystal | | |
| Switches | | | X401 | 91T45433W49 | 8.3886MHz |
| S401 | 40T35140W22 | SKQDAB (POWER / INTLZ) | Capacitors | | |
| S402 | 40T35140W22 | SKQDAB (CLOCK) | C401 | 08S82122F17 | CP., 15pF |
| S403 | 40T35140W22 | SKQDAB (A.PROC) | E401 | 23T25191W07 | ELY., 22μF / 6.3V |
| S404 | 40T35140W22 | SKQDAB (M / P, T.INFO) | C402 | 08S82122F17 | CP., 15pF |
| S408 | 40T35140W22 | SKQDAB (DEFEAT / TITLE) | E402 | 23T25191W07 | ELY., 22μF / 6.3V |
| S409 | 40T35140W22 | SKQDAB (M.S.CD, UP / FF) | C403 | 08S65128F69 | CP., 0.01μF |
| S410 | 40T35140W22 | SKQDAB (M.S.CD, DN / REW) | C404 | 08S65128F69 | CP., 0.01μF |
| S411 | 40T35140W22 | SKQDAB (DOLBY B / C, 1 / Y) | E404 | 23T25191W07 | ELY., 22μF / 6.3V |
| S412 | 40T35140W22 | SKQDAB (P.S.DN / 2 / M) | C405 | 08S65128F69 | CP., 0.01μF |
| S413 | 40T35140W22 | SKQDAB (P.S.UP / 3 / D) | C406 | 08S65128F69 | CP., 0.01μF |
| S414 | 40T35140W22 | SKQDAB (B.SKIP / 4 / CT) | C407 | 08S65128F69 | CP., 0.01μF |
| S415 | 40T35140W22 | SKQDAB (R.EJECT / 5 / H) | C408 | 08S65128F69 | CP., 0.01μF |
| S416 | 40T35140W22 | SKQDAB (PROG / 6 / M) | C409 | 08S65128F69 | CP., 0.01μF |
| S417 | 40T35140W22 | SKQDAB (MONO / REPEAT) | C410 | 08S65128F55 | CP., 680pF |
| S418 | 40T35140W22 | SKQDAB (PTY / SCAN) | C411 | 08S65128F69 | CP., 0.01μF |
| S419 | 40T35140W22 | SKQDAB (DX / A - ME / M.I.X.) | C412 | 08S65128F35 | CP., 100pF |
| S420 | 40T35140W22 | SKQDAB (EFFECT / A.P.I) | Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.) | | |
| S421 | 40T35140W22 | SKQDAB (D.DISP) | R401 | 06S64995F77 | 10K ohm |
| S422 | 40T35140W22 | SKQDAB (A.S.C.) | R402 | 06S64995F53 | 1K ohm |
| S426 | 40T35140W22 | SKQDAB (EJECT / CNTRST) | R404 | 06S64995F53 | 1K ohm |
| Lamps | | | R405 | 06S64995F53 | 1K ohm |
| PL401 | 65T55635W02 | 6V-70mA | R406 | 06S64995F53 | 1K ohm |
| PL402 | 65T55635W03 | 6V-70mA | R407 | 06S64995F53 | 1K ohm |
| PL403 | 65T55635W02 | 6V-70mA | R409 | 06S64995F83 | 18K ohm |
| PL404 | 65T55635W02 | 6V-70mA | R410 | 06S64995F77 | 10K ohm |
| PL405 | 65T55635W03 | 6V-70mA | R411 | 06S64995F77 | 10K ohm |
| PL406 | 65T55635W03 | 6V-70mA | R412 | 06S64995F77 | 10K ohm |
| PL407 | 65T55635W02 | 6V-70mA | R413 | 06S64995F77 | 10K ohm |
| PL408 | 65T55635W02 | 6V-70mA | R414 | 06S64995F93 | 47K ohm |
| PL409 | 65T55635W03 | 6V-70mA | R415 | 06S64995F59 | 1.8K ohm |
| PL410 | 65T55635W03 | 6V-70mA | | | |
| PL414 | 65T95083F05 | 6.7V-85mA | | | |
| PL415 | 65T95083F09 | 6.7V-85mA | | | |
| PL416 | 65T55635W03 | 6V-70mA | | | |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|----------------------------------|-------------|----------------------|--|-------------|-------------------------|
| R416 | 06S64996F02 | 100K ohm | Crystal | | |
| R417 | 06S70072F09 | 15 ohm 1/4W | X101 | 91T45433W43 | 7.2MHz |
| R418 | 06S70072F09 | 15 ohm 1/4W | X102 | 91T45433W18 | 4.332MHz |
| R419 | 06S70072F09 | 15 ohm 1/4W | X103 | 91T65014W01 | 4MHz |
| R422 | 06S70072F09 | 15 ohm 1/4W | Capacitors | | |
| R423 | 06S70072F09 | 15 ohm 1/4W | C101 | 08S65128F69 | CP., 0.01µF |
| R424 | 06S70072F09 | 15 ohm 1/4W | E101 | 23T74180F02 | CP., ELY. 100µF / 6.3V |
| R425 | 06S70072F09 | 15 ohm 1/4W | C102 | 08S65128F69 | CP., 0.01µF |
| R426 | 06S70072F16 | 30 ohm 1/4W | E102 | 23T74180F01 | CP., ELY. 22µF / 6.3V |
| R427 | 06S70072F15 | 27 ohm 1/4W | C103 | 08T15807W05 | CP., 0.1µF |
| R428 | 06S64995F93 | 47K ohm | E103 | 23T74180F03 | CP., ELY. 10µF / 16V |
| R431 | 06S64995F77 | 10K ohm | C104 | 08T15399W02 | CP., 0.033µF |
| R432 | 06S64995F77 | 10K ohm | E104 | 23T74180F16 | CP., ELY. 2.2µF / 50V |
| R433 | 06S64995F77 | 10K ohm | C105 | 23T55636W11 | ELY., (B.P) 2.2µF / 35V |
| R434 | 06S64995F77 | 10K ohm | E105 | 23T74180F03 | CP., ELY. 10µF / 16V |
| R435 | 06S64996F02 | 100K ohm | C106 | 08T55487W01 | CP., 0.15µF |
| R436 | 06S64996F02 | 100K ohm | E106 | 23T74180F03 | CP., ELY. 10µF / 16V |
| R437 | 06S64996F02 | 100K ohm | C107 | 08T15399W02 | CP., 0.033µF |
| R438 | 06S64996F02 | 100K ohm | E107 | 23T74180F13 | CP., ELY. 0.68µF / 50V |
| R439 | 06S64996F02 | 100K ohm | C108 | 08S65128F69 | CP., 0.01µF |
| R440 | 06S64996F02 | 100K ohm | C109 | 08S65128F69 | CP., 0.01µF |
| R441 | 06S64995F93 | 47K ohm | C110 | 08S65128F29 | CP., 56pF |
| R442 | 06S64995F53 | 1K ohm | C112 | 08S65128F57 | CP., 1000pF |
| R443 | 06S64995F93 | 47K ohm | C113 | 08S82122F19 | CP., 18pF |
| R499 | 06S64996F02 | 100K ohm | C114 | 08S82122F19 | CP., 18pF |
| VR401 | 18T45332W01 | 10K ohm (Selfreturn) | C115 | 08S82122F19 | CP., 18pF |
| PLL & RDS P. C. Board | | | C116 | 08S82122F19 | CP., 18pF |
| IC's | | | C117 | 08S82122F49 | CP., 330pF |
| IC101 | 51T68999F13 | BU4066BF | C118 | 08S65128F53 | CP., 560pF |
| or | 51T68999F23 | XRU4066BF | C119 | 08S65128F69 | CP., 0.01µF |
| IC102 | 51T93336F01 | NJM4558M | C121 | 08S65128F35 | CP., 100pF |
| IC103 | 51T35504W02 | LC7219 | C122 | 08S65128F35 | CP., 100pF |
| IC104 | 51T55054W02 | SAA6579T | C123 | 08S65128F35 | CP., 100pF |
| IC105 | 51T35503W02 | LC7073M | Resistors (All resistors are chip 1/10W±5% unless otherwise noted.) | | |
| Transistors | | | R101 | 06S64995F77 | 10K ohm |
| Q101 | 48T73888F08 | CP., FMG1 | R102 | 06S64995F61 | 2.2K ohm |
| Q102 | 48T62967F03 | CP., DTC124K | R103 | 06S64995F53 | 1K ohm |
| Q103 | 48T63420F01 | CP., 2SA1037K | R104 | 06S64995F61 | 2.2K ohm |
| Q104 | 48T62967F03 | CP., DTC124K | R105 | 06S64995F29 | 100 ohm |
| Diodes | | | R106 | 06S64995F77 | 10K ohm |
| D102 | 48T63462F01 | CP., DAN202K | R108 | 06S64995F53 | 1K ohm |
| | | | R109 | 06S64995F61 | 2.2K ohm |
| | | | R110 | 06S64995F53 | 1K ohm |
| | | | R111 | 06S64995F71 | 5.6K ohm |

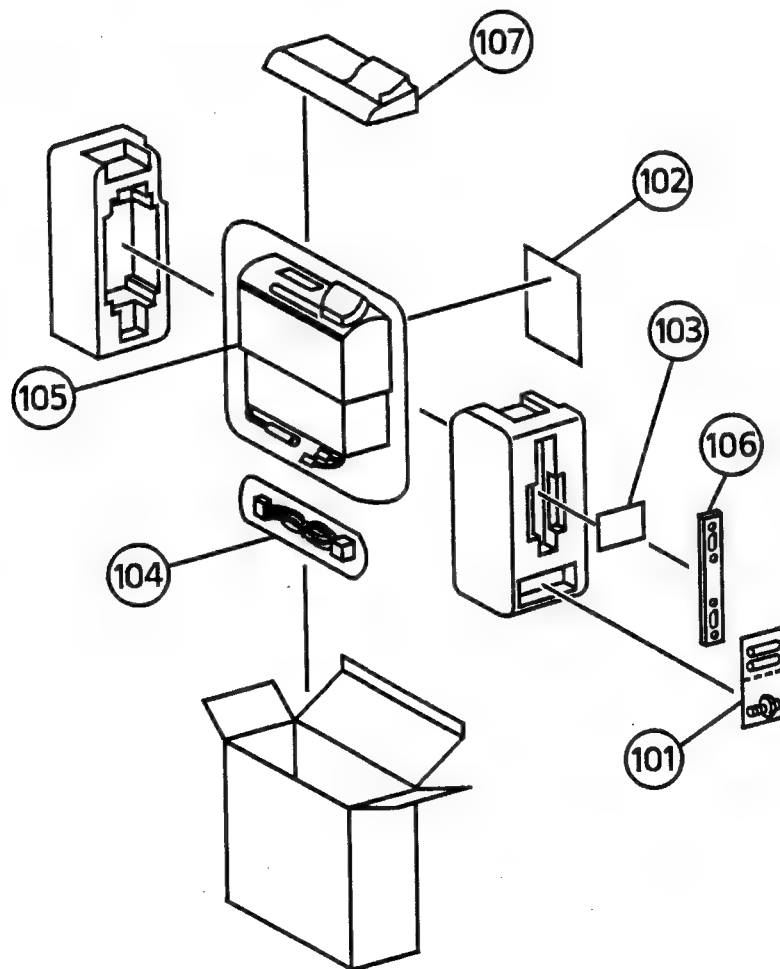
| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|---|-------------|-----------------------------|---|-------------|-------------------|
| Resistors (All resistors are chip 1/10W±5% unless otherwise noted.) | | | Resistors (All resistors are chip 1/10W±5% unless otherwise noted.) | | |
| R112 | 06S64995F53 | 1K ohm | R1501 | 06S64995F77 | 10K ohm |
| R113 | 06S64995F53 | 1K ohm | R1502 | 06S64995F77 | 10K ohm |
| R114 | 06S64995F77 | 10K ohm | R1503 | 06S64996F10 | 220K ohm |
| R115 | 06S64995F93 | 47K ohm | R1504 | 06S64996F26 | 1M ohm |
| R116 | 06S64995F53 | 1K ohm | R1505 | 06S64996F18 | 470K ohm |
| R117 | 06S64995F61 | 2.2K ohm | R1506 | 06S64996F01 | 91K ohm |
| R118 | 06S64995F29 | 100 ohm | GR Audio P. C. Board | | |
| R119 | 06S64995F77 | 10K ohm | IC / Diode | | |
| R120 | 06S64995F69 | 4.7K ohm | IC1201 | 51T15146W01 | IC, TA7705P |
| R130 | 06S64995F77 | 10K ohm | D1201 | 48T44813F01 | MA165TA |
| Switch P. C. Board | | | Capacitors | | |
| Switches | | | E1201 | 23T25149W09 | ELY., 10µF / 16V |
| S405 | 40T35140W22 | SKQDAB (MODE LOUD) | C1202 | 08T35389W07 | PF., 330pF |
| S423 | 40T35140W22 | SKQDAB (TUNER / BAND / DAP) | E1202 | 23T25149W13 | ELY., 100µF / 10V |
| S424 | 40T35140W22 | SKQDAB (TAPE, PLAY / PAUSE) | C1203 | 08T35389W07 | PF., 330pF |
| S425 | 40T35140W22 | SKQDAB (DISC, PLAY / PAUSE) | E1203 | 23T25149W13 | ELY., 100µF / 10V |
| Lamps | | | C1204 | 08T35389W07 | PF., 330pF |
| PL411 | 65T55635W02 | 6V-70mA | E1204 | 23T25149W12 | ELY., 47µF / 16V |
| PL412 | 65T55635W04 | 6V-70mA | C1205 | 08T35389W07 | PF., 330pF |
| PL413 | 65T55635W04 | 6V-70mA | E1205 | 23T25149W15 | ELY., 4.7µF / 35V |
| GR Control P. C. Board | | | E1206 | 23T25149W15 | ELY., 4.7µF / 35V |
| IC's / Transistors | | | C1208 | 08T35122W02 | TF, 0.012µF |
| IC1501 | 51T25621W02 | IC, AN6275NK | C1209 | 08T35122W02 | TF, 0.012µF |
| IC1502 | 51T67915F01 | IC, M51143AL | Resistors (All resistors are chip 1/10W±5% unless otherwise noted.) | | |
| Q1501 | 48T84366F05 | 2SB1243 | R1201 | 06S53330F29 | 100 ohm 1/8W |
| Q1502 | 48T94606F12 | CP., DTC144TU | R1202 | 06S53330F32 | 130 ohm 1/8W |
| Capacitors | | | R1203 | 06S53330F32 | 130 ohm 1/8W |
| E1501 | 23S61524F32 | ELY., 1µF / 50V | R1204 | 06S64996F14 | 330K ohm |
| C1502 | 08T35374W01 | CP., 0.1µF | R1205 | 06S64996F14 | 330K ohm |
| C1503 | 08T35374W01 | CP., 0.1µF | R1208 | 06S64995F78 | 11K ohm |
| C1504 | 08T35374W01 | CP., 0.1µF | R1209 | 06S64995F78 | 11K ohm |
| C1505 | 08S65128F15 | CP., 15pF | R1210 | 06S64995F81 | 15K ohm |
| | | | R1211 | 06S64995F81 | 15K ohm |
| | | | R1212 | 06S64995F65 | 3.3K ohm |
| | | | R1213 | 06S53330F65 | 3.3K ohm 1/8W |
| | | | R1214 | 06S53330F85 | 22K ohm 1/8W |
| | | | R1215 | 06S64995F85 | 22K ohm |

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|----------------------|-------------|---|------------|----------|-------------|
| Miscellaneous | | | | | |
| CB401 | 09T45337W02 | 17P Connector | | | |
| CH401 | 09T45338W01 | 17P Connector | | | |
| or | 09T45338W02 | 17P Connector | | | |
| ET001 | 01T15513W04 | Antenna Receptacle | | | |
| ET301 | 01T35628W04 | Assy., RCA Connector | | | |
| ET801 | 09T55175W16 | Assy., Power Supply Connector | | | |
| ET803 | 01T55619W01 | Assy., DIN Connector (Ai-NET OUTPUT Connector) | | | |
| HD1101 | 88T35406W02 | Head | | | |
| JK802 | 09T55071W12 | Assy., DIN Socket (Ai-NET INPUT Connector) | | | |
| LCD401 | 65T55617W03 | LCD Display | | | |
| M1501 | 01V41100W72 | Assy., Main Motor (13.2V-88mA) | | | |
| PT1501 | 51T15144W01 | Sensor, Photo ON2170-R | | | |
| S1501 | 40T15222W01 | Switch, Detector (PACK IN) | | | |
| S1502 | 40T15382W01 | Switch, Detector (PACK DOWN) | | | |
| S1503 | 40T15382W01 | Switch, Detector (METAL) | | | |
| SD1501 | 01T10369W02 | Assy., Eject Solenoid | | | |
| SD1502 | 01T15249W01 | Assy., Play Solenoid | | | |
| SD1503 | 01T10371W01 | Assy., RF Solenoid | | | |

Packing Assembly Parts List

| Symbol No. | Part No. | Description | Symbol No. | Part No. | Description |
|------------|-------------|---------------------------|------------|----------|-------------|
| 101-1 | 02B47353F01 | Nut, Hex. (M5) | | | |
| 101-2 | 03S72235F42 | Screw, Countersink (M5×8) | | | |
| 101-3 | 46A42363F01 | Stud, Bolt | | | |
| 101-4 | 60T55629W01 | Battery, Sun-3 | | | |
| 102 | 68P50390W83 | Owner's Manual | | | |
| 103 | 01T55620W02 | Unit, Remocon | | | |
| 104 | 01T55176W10 | Assy., Wire Power | | | |
| 105 | 15D50406W01 | Case, Inner | | | |
| 106 | 07B64552F01 | Bracket, Strap Receiver | | | |
| 107 | 15D51292W02 | Carring, Case | | | |

Packing Method View



Cabinet Assembly Parts List

Note : No parts number on parts list are not supplied.

| Symbol No. | Index | Part No. | Description | Symbol No. | Index | Part No. | Description |
|------------|-------|-------------|---------------------------------------|------------|-------|----------|-------------|
| 1 | 5-C | 13C51670W03 | Assy., Nosepiece | | | | |
| 4 | 2-D | 13D51690W01 | Nose, Bottom | | | | |
| 5 | | 03S44205G07 | Screw, Pan (M2.6×5) | | | | |
| 7 | 4-A | 36D51684W01 | Knob, Shuttle (L) | | | | |
| 8 | 3-A | 36D51684W02 | Knob, Shuttle (R) | | | | |
| 9 | 2-F | 81D51064W01 | Cassette Deck, GR75H13A | | | | |
| 11 | 3-F | 77B41467W01 | FM/MW/LW Tuner UNIT, MB4R1010 (FE001) | | | | |
| 12 | 2-E | 43A42110W01 | Spacer, Microphone | | | | |
| 13 | 2-G | 43A52051W01 | Spacer, Panel | | | | |
| 15 | | 03S68555F19 | Screw, Pan (M2×12) | | | | |
| 17 | 3-B | 03S68555F02 | Screw, Pan (M2×5.5) | | | | |
| 18 | 4-B | 15A51669W01 | Cover, LCD | | | | |
| 19 | 3-C | 15B50304W01 | Case, LCD | | | | |
| 20 | 3-C | 61A50305W01 | Lens, LCD | | | | |
| 21 | 4-C | 14A60585W01 | Insulator, LCD | | | | |
| 22 | 4-C | 26B60630W01 | Reflector, Sheet | | | | |
| 23 | | 75T35021W05 | Rubber, Electric | | | | |
| 24 | 3-B | 43C51686W01 | Spacer, Shuttle | | | | |
| 25 | 3-B | 36B51687W01 | Knob, Shuttle Base | | | | |
| 26 | | 07A51685W01 | Bracket, Shuttle | | | | |
| 27 | 3-B | 03S68555F07 | Screw, Pan (M2×4) | | | | |
| 29 | 4-D | 13C51691W01 | Assy., Front Escutcheon | | | | |
| 30 | 4-C | 14S51152W23 | Insulator, Cover | | | | |
| 31 | 2-F | 04S40070G01 | Washer, Flat (M3.3) | | | | |
| 32 | 2-F | 03S44205G30 | Screw, Pan (M2.6×4) | | | | |
| 33 | 3-C | 03S68555F15 | Screw, Pan (M2×7) | | | | |
| 37 | 2-B | 01V54300W13 | Assy., Nose Unit | | | | |
| 38 | 3-A | 14A61570W01 | Insulator, Cover | | | | |

Exploded View (Cabinet)

1

2

3

4

5

A

B - 63 -

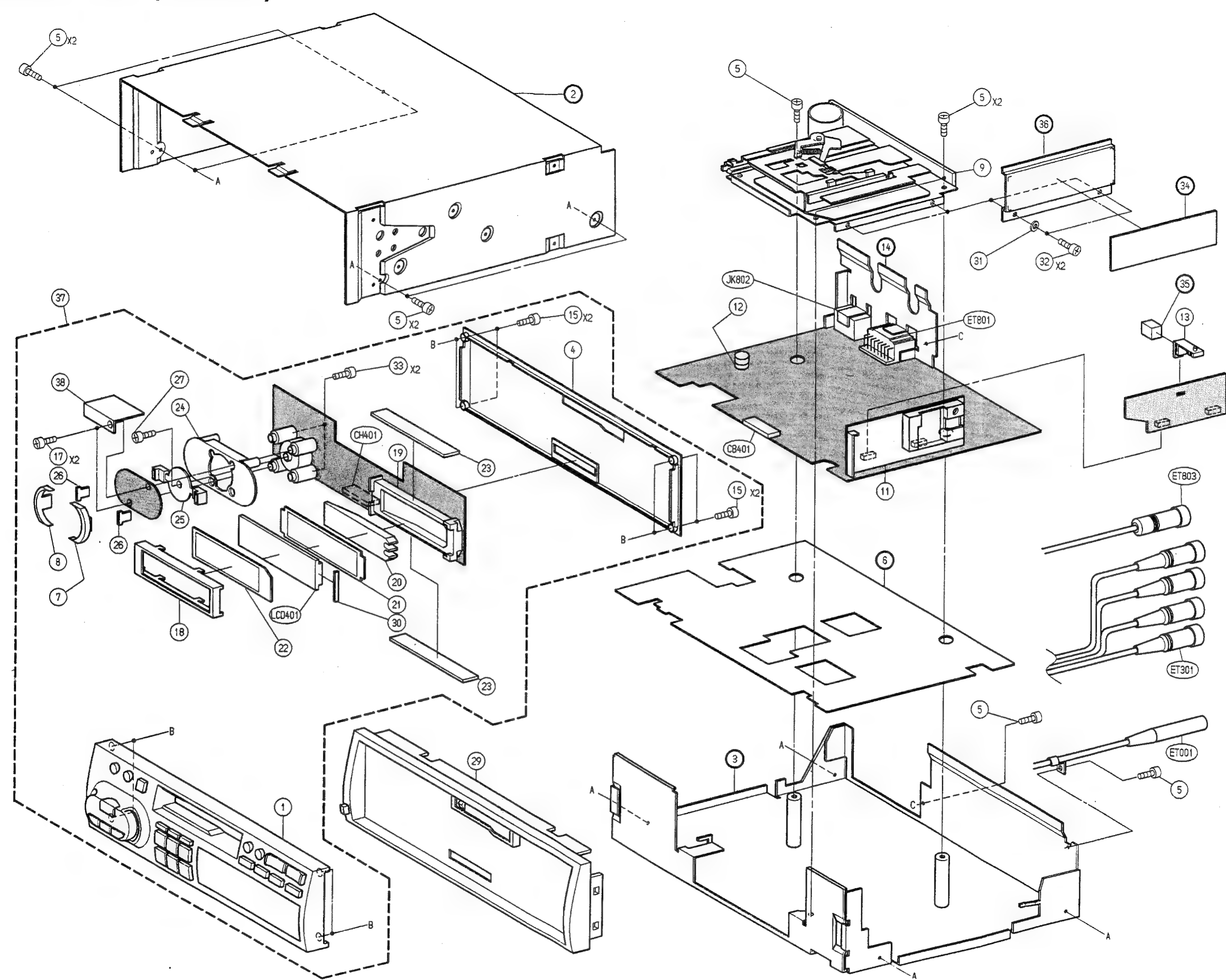
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D

E

F - 64 -

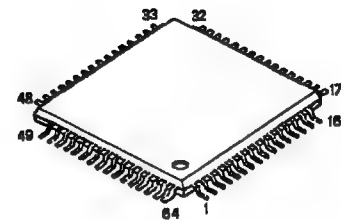
G



Semi - Conductor Lead Identifications

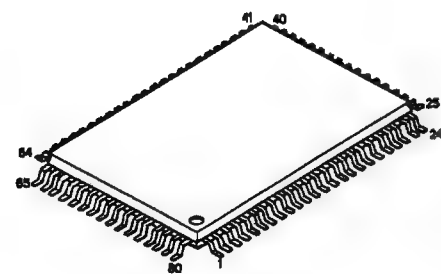
Note : The parts is not mentioned, refer to the Schematic Diagram.

45552W28 : IC401



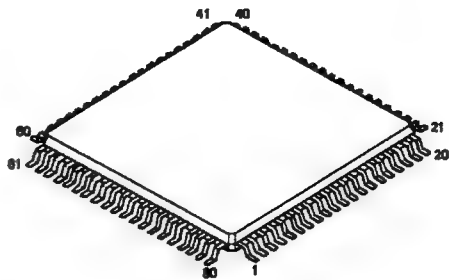
| PIN NO. | CODE ADDRESS | I/O | PIN NO. | CODE ADDRESS | I/O | PIN NO. | CODE ADDRESS | I/O |
|---------|-----------------|-----|---------|-----------------|-----|---------|-----------------|-----|
| 1 | 7582 TNH | O | 23 | EEPDI | I | 45 | AREA 1 | I |
| 2 | 7582 CE | O | 24 | V _{SS} | — | 46 | V _{SS} | — |
| 3 | 7582 CLK | O | 25 | EEPDO | O | 47 | V _{SS} | — |
| 4 | 7582 DATA | O | 26 | P.ON | O | 48 | KR1 | I |
| 5 | 7229 CS | O | 27 | KSO | O | 49 | KR2 | I |
| 6 | 7229 CLK | O | 28 | KS 1 | O | 50 | KR3 | I |
| 7 | 7229 RST | O | 29 | KS 2 | O | 51 | KR4 | I |
| 8 | DRG/GRN | O | 30 | KS 3 | O | 52 | KR5 | I |
| 9 | V _{SS} | — | 31 | V _{SS} | — | 53 | KR6 | I |
| 10 | V _{SS} | — | 32 | V _{SS} | — | 54 | SELF VR | I |
| 11 | V _{SS} | — | 33 | V _{SS} | — | 55 | V _{SS} | — |
| 12 | V _{SS} | — | 34 | V _{SS} | — | 56 | V _{SS} | — |
| 13 | V _{SS} | — | 35 | RESET | I | 57 | CONT-STATUS | I |
| 14 | V _{SS} | — | 36 | V _{SS} | — | 58 | CONT-COMMAND | O |
| 15 | V _{SS} | — | 37 | REMOCON | I | 59 | CONT-SCK | I |
| 16 | V _{SS} | — | 38 | CONT-START | I | 60 | 7229 C/D | O |
| 17 | V _{SS} | — | 39 | AREA 0 | I | 61 | 7229 BUSY | I |
| 18 | V _{SS} | — | 40 | V _{CC} | — | 62 | V _{SS} | — |
| 19 | V _{SS} | — | 41 | X2 | — | 63 | 7229 SI | O |
| 20 | V _{SS} | — | 42 | X1 | — | 64 | 7229 SCK | O |
| 21 | V _{SS} | — | 43 | V _{SS} | — | | | |
| 22 | EEPCLK | O | 44 | NC | — | | | |

35265W02 : IC403



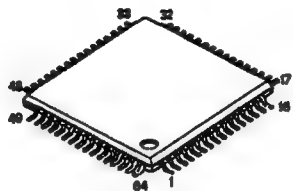
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|---------|--------------|-----|---------|-------------------|-----|---------|--------------|-----|
| 1 | C38 | O | 21 | V _{LC} 5 | I | 41 | CLOCK | I |
| 2 | C39 | O | 22 | V _{LC} 1 | I | 42 | NC | — |
| 3 | C40 | O | 23 | NC | — | 43 | NC | — |
| 4 | C41 | O | 24 | V _{LC} 4 | I | 44 | NC | — |
| 5 | C42/R15 | O | 25 | V _{LC} 2 | I | 45 | NC | — |
| 6 | C43/R14 | O | 26 | V _{LC} 3 | I | 46 | C3 | O |
| 7 | C44/R13 | O | 27 | DO/SI | I/O | 47 | C4 | O |
| 8 | C45/R12 | O | 28 | V _{SS} | — | 48 | C5 | O |
| 9 | C46/R11 | O | 29 | V _{SS} | — | 49 | C6 | O |
| 10 | C47/R10 | O | 30 | NC | — | 50 | C7 | O |
| 11 | C48/R9 | O | 31 | NC | — | 51 | C8 | O |
| 12 | C49/R8 | O | 32 | BUSY | O | 52 | C9 | O |
| 13 | R15/R7 | O | 33 | V _{DD} | — | 53 | C10 | O |
| 14 | R14/R6 | O | 34 | V _{SS} | — | 54 | C11 | O |
| 15 | R13/R5 | O | 35 | STB/SCK | I | 55 | C12 | O |
| 16 | R12/R4 | O | 36 | C/D | I | 56 | C13 | O |
| 17 | R11/R3 | O | 37 | V _{SS} | — | 57 | C14 | O |
| 18 | R10/R2 | O | 38 | V _{SS} | — | 58 | C15 | O |
| 19 | R9/R1 | O | 39 | CS | I | 59 | C16 | O |
| 20 | R8/R0 | O | 40 | RESET | I | 60 | C17 | O |

55433W08 : IC501



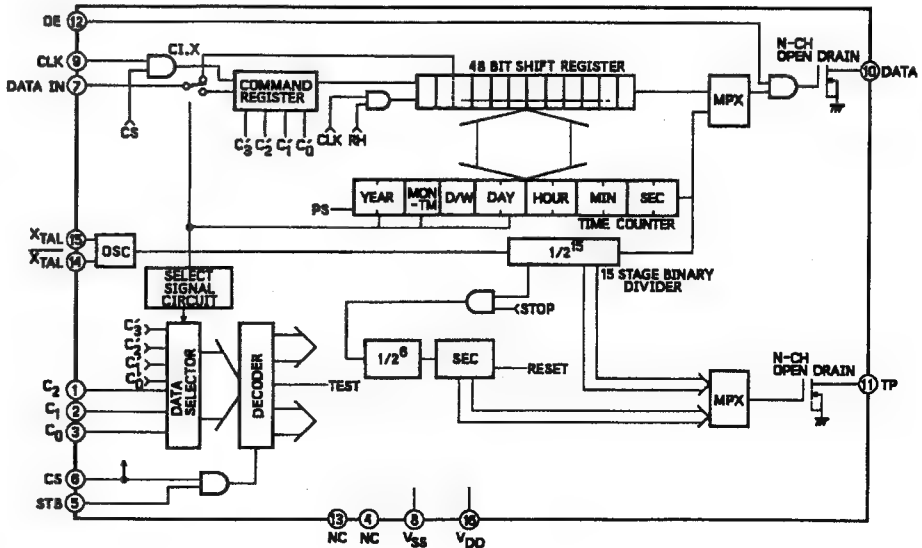
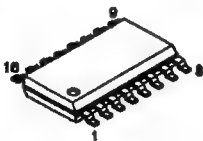
| PIN NO. | CODE ADDRESS | I/O | PIN NO. | CODE ADDRESS | I/O | PIN NO. | CODE ADDRESS | I/O |
|---------|-----------------|-----|---------|------------------|-----|---------|-----------------|-----|
| 1 | RESET | I | 21 | EEP DI | I | 41 | P/R | O |
| 2 | X1 | O | 22 | EEP DO | O | 42 | PACK IN | I |
| 3 | X2 | I | 23 | NC | — | 43 | TP ALM | O |
| 4 | V _{CC} | — | 24 | TMR DATA | I | 44 | O.MOTOR | O |
| 5 | V _{CC} | — | 25 | TMR OE | O | 45 | PULL UP | O |
| 6 | NMT | I | 26 | TMR CLK | O | 46 | EJ.SOL | O |
| 7 | V _{CC} | — | 27 | TMR S2 | O | 47 | V _{CC} | — |
| 8 | V _{CC} | — | 28 | TMR S1 | O | 48 | RF.SOL | O |
| 9 | DTS SCK | O | 29 | ACC+5 | I | 49 | PLY.SOL | O |
| 10 | DTS CMD | O | 30 | MIC L | I | 50 | RUN DET | I |
| 11 | DTS STS | I | 31 | MIC M | I | 51 | PACK DN | I |
| 12 | V _{SS} | — | 32 | MIC H | I | 52 | DOL B | O |
| 13 | DTS START | O | 33 | NOSE DN | I | 53 | DOL C | O |
| 14 | NC | — | 34 | AREA 0 | I | 54 | R/T | O |
| 15 | DTS STBY | O | 35 | AREA 1 | I | 55 | INT/EXT | O |
| 16 | DTS MUTE | I | 36 | LCD CRT | O | 56 | V _{SS} | — |
| 17 | DTS CE | O | 37 | MS.DET | I | 57 | E.V.CE | O |
| 18 | ACC+5 | I | 38 | AV _{SS} | I | 58 | E.V.CLK | O |
| 19 | BAT+5 | I | 39 | O.FAST | O | 59 | E.V.DATA | O |
| 20 | O.REM | O | 40 | MTL | I | 60 | PRE MUTE | O |

45258W02 : IC504



| PIN NO. | CODE ADDRESS | I/O | PIN NO. | CODE ADDRESS | I/O | PIN NO. | CODE ADDRESS | I/O |
|---------|-----------------|-----|---------|------------------|-----|---------|--------------|-----|
| 1 | CE1 | O | 23 | AD2 | I/O | 45 | PLL UP | — |
| 2 | NC | — | 24 | V _{SS} | — | 46 | PLL UP | — |
| 3 | DYS-MUTE | O | 25 | AD1 | I/O | 47 | MULTI-PATH | I |
| 4 | 7073-RESET | O | 26 | AD0 | I/O | 48 | ADJON | I |
| 5 | SOK REF | O | 27 | LE | O | 49 | S-METER | I |
| 6 | RESET | I | 28 | DTS-STB | I | 50 | PLL UP | — |
| 7 | X2 | — | 29 | RDS CLK | I | 51 | PLL DOWN | — |
| 8 | X1 | — | 30 | RDS START | I | 52 | PLL CLOCK | O |
| 9 | V _{SS} | — | 31 | RDS DATA | I | 53 | PLL DATA | O |
| 10 | CE2 | O | 32 | PLL DATA IN | I | 54 | LPE SW | O |
| 11 | NC | — | 33 | PLL UP | — | 55 | TF-MUTE | O |
| 12 | NC | — | 34 | DTS START | I | 56 | PLL CE | O |
| 13 | NC | — | 35 | DTS CMD | I | 57 | NC | — |
| 14 | NC | — | 36 | V _{SS} | — | 58 | LW | O |
| 15 | A10 | O | 37 | NC | — | 59 | FM/AM | O |
| 16 | A9 | O | 38 | DTS CLOCK | I | 60 | LOCAL/DBX | O |
| 17 | A8 | O | 39 | DTS STATUS | O | 61 | MONO | O |
| 18 | AD7 | I/O | 40 | V _{CC} | — | 62 | DTS CE | I |
| 19 | AD6 | I/O | 41 | V _{CC} | — | 63 | SD | I |
| 20 | AD5 | I/O | 42 | AV _{SS} | — | 64 | WR | O |
| 21 | AD4 | I/O | 43 | AVREF | — | | | |
| 22 | AD3 | I/O | 44 | ST | I | | | |

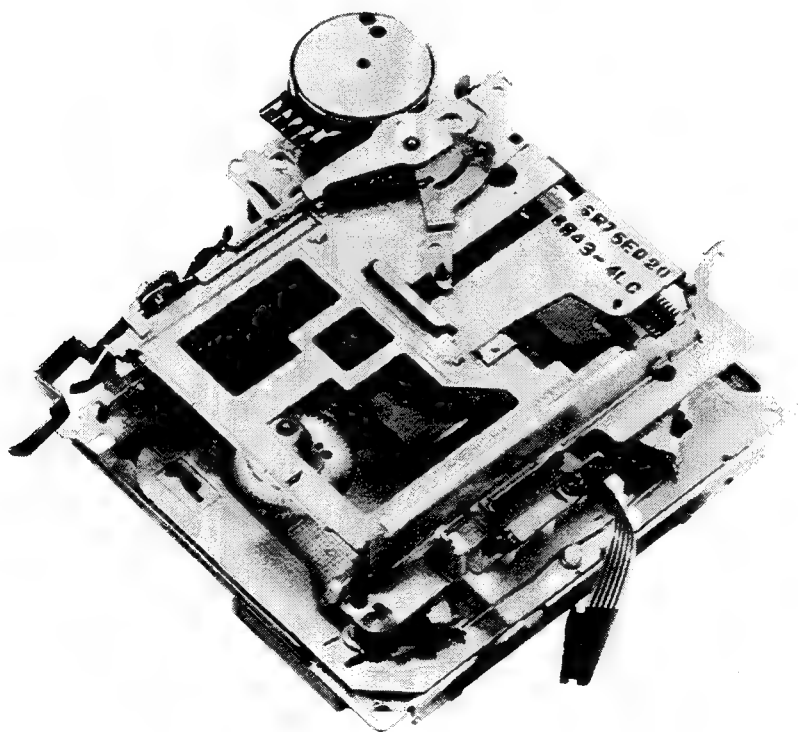
μPD4990AG : IC511



////ALPINE[®] SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED(V)



GR/GR-Y SERIES

Contents

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Memo

List of Usable Lock Washers

| | SIZE | PARTS NO. | QUANTITY | | | |
|----|---------------------|-------------|-----------------|-----------------|----------------|-----------------|
| | | | GR75E Series | GR75L Series | GR-Y Series | GR75H Series |
| 1 | (M1.2 × 3.5 × 0.25) | 04B41345P01 | 4 | 4 | 4 | 2 |
| 2 | (M1.7 × 3.5 × 0.25) | 04B41345P02 | 1 | 1 | 1 | 4 |
| 3 | (M1.2 × 2.5 × 0.25) | 04B41345P11 | 8 | 8 | 8 | 9 |
| 4 | (M1.7 × 3.5 × 0.35) | 04B41345P12 | 2 | 2 | 2 | 2 |
| 5 | (M1.2 × 3.5 × 0.35) | 04B41345P15 | 2 | 2 | 2 | 2 |
| 6 | (M1 × 2.5 × 0.25) | 04B41345P17 | 1 | 1 | 1 | 2 |
| 7 | (M2.6 × 5 × 0.25) | 04B41345P29 | 1 | 1 | 1 | 1 |
| 8 | (M3.1 × 8 × 0.05) | 04B41345P30 | 1 | 1 | 1 | 1 |
| 9 | (M3.1 × 5 × 0.35) | 04B41345P32 | 2 | 2 | 2 | 2 |
| 10 | (M1.2 × 2.5 × 0.3) | 04B41345P34 | 1 | 1 | 1 | 0 |
| 11 | (M1.7 × 2.8 × 0.25) | 04B41345P35 | 1 | 1 | 1 | 2 |
| 12 | (M2.1 × 4 × 0.25) | 04B41345P37 | 1 | 1 | 1 | 0 |
| 13 | (M2.1 × 4 × 0.13) | 04S40075G05 | 2 | 2 | 2 | 0 |
| 14 | (M2.1 × 4 × 0.3) | 04S40075G58 | 0 | 0 | 0 | 1 |

List of Usable Oil

- 1) Molykote G paste
- 2) Grease EM-30L
- 3) Grease PG-671

List of Usable Jigs

- 1) GR bottom gear jig (Part No. 44A20788W01)
- 2) Head height adjustment gauge
AI-500 (Part No. AI-500)

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

- (1) Turn the mechanism around as shown in Figure 1.
- (2) Remove M1 lock washer ① as shown in Figure 1.
- (3) Remove three screws ② as shown in Figure 1.
- (4) Lift the bottom cover slowly from the position ①-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
- (5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
- (6) Slide the slider in the direction ①-2 as shown in Figure 2.
- (7) Push down the cassette holder in the direction ①-3 as shown in Figure 2.
- (8) Pull the door pin in the direction ①-4 so that the mechanism is locked in as shown in Figure 2.
- (9) Turn the mechanism around as shown in Figure 3.
- (10) Pull the automatic metal lever in the direction ①-5 and the RF solenoid chip in the direction ①-6 as shown in Figure 3.
- (11) Insert the hooks of the bottom cover into the chassis in the direction ①-7, and then join the part ①-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
- (12) Since the hooks marked ①-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole ①-9, and fix it turning the jig slightly in the direction ①-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
- (13) Fix the screws and the lock washer that have been removed.

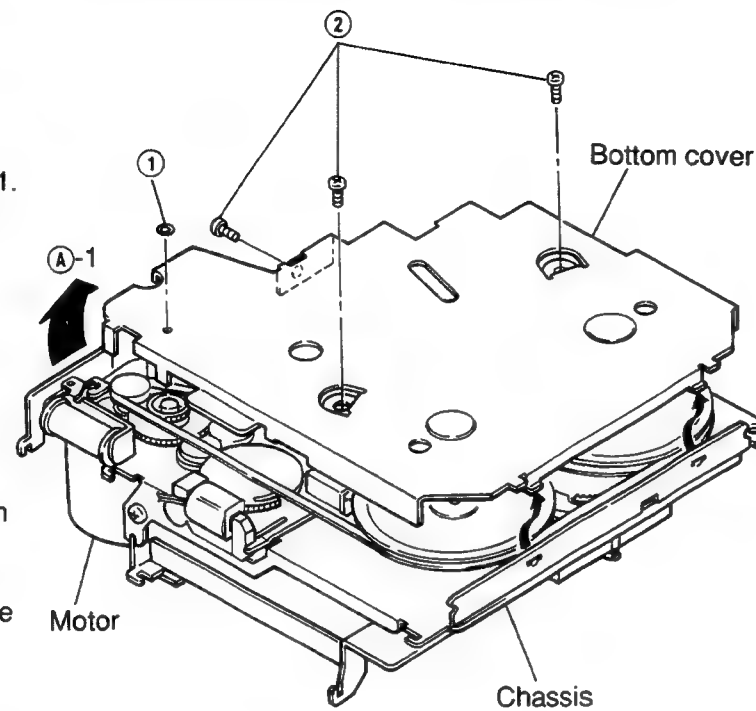


Figure 1

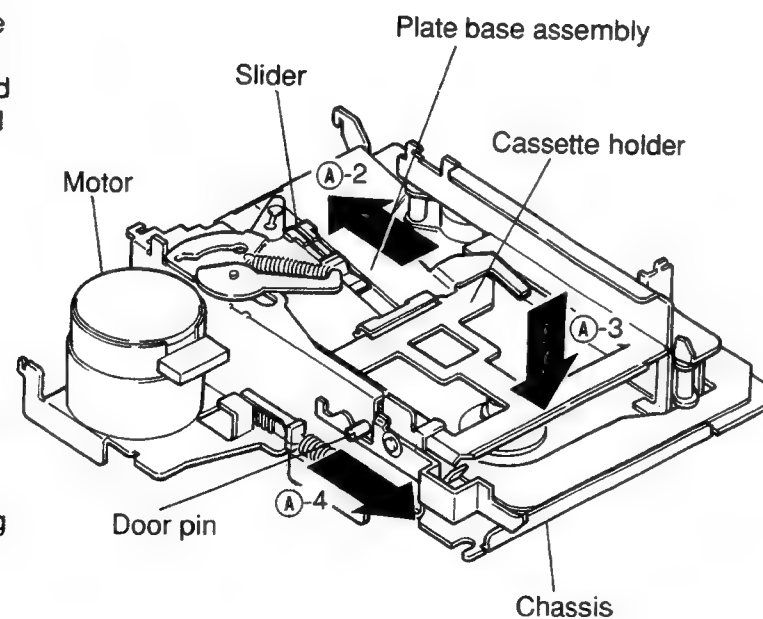


Figure 2

- (14) Insert the jig into the hole ①-9 as shown in Figure and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction ①-10 with the finger. Then the eject operation is completed. Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

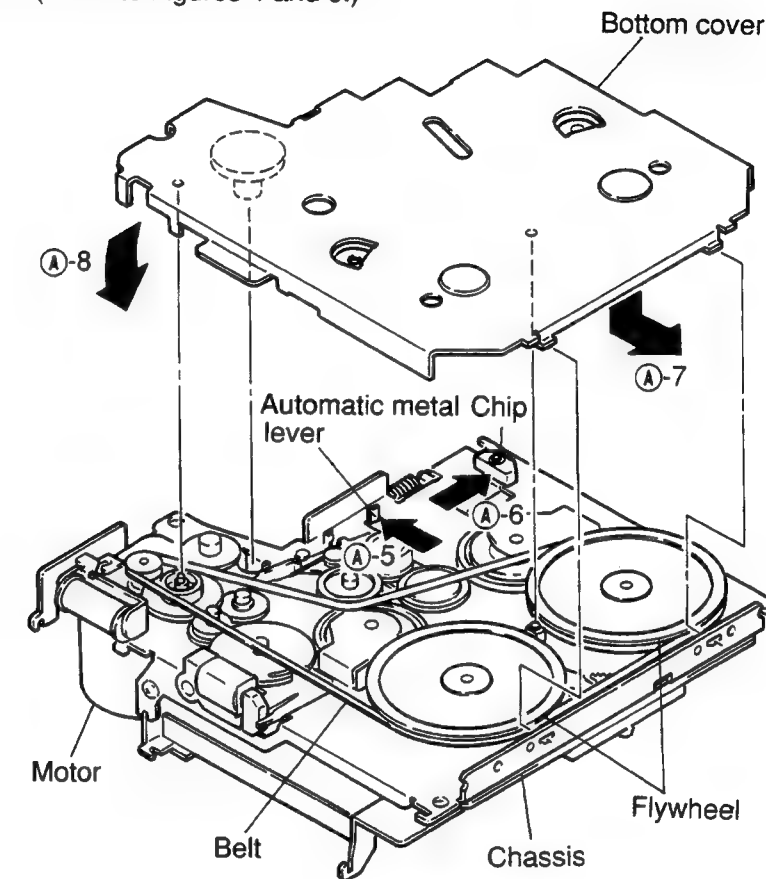


Figure 3

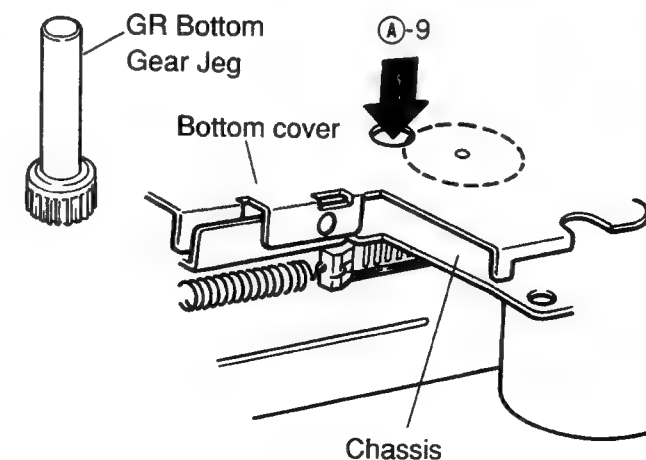


Figure 4

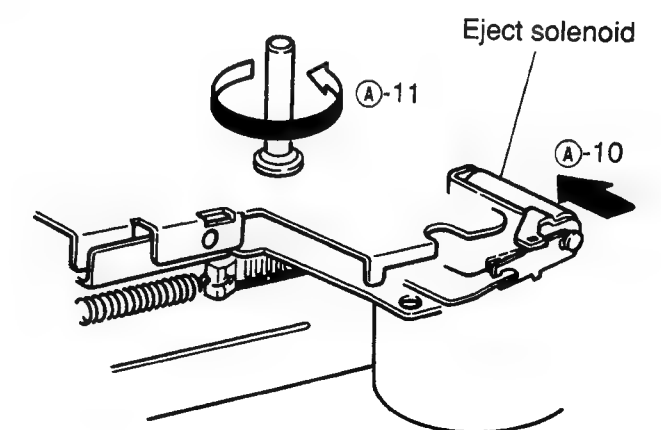


Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear

- (1) Remove M1.2 lock washer ③ as shown in Figure 6.
- (2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.
- (3) Apply the molykote E paste to the section ⑧-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid

- (1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.
- (2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to $350^{\circ} \pm 10^{\circ}$ and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

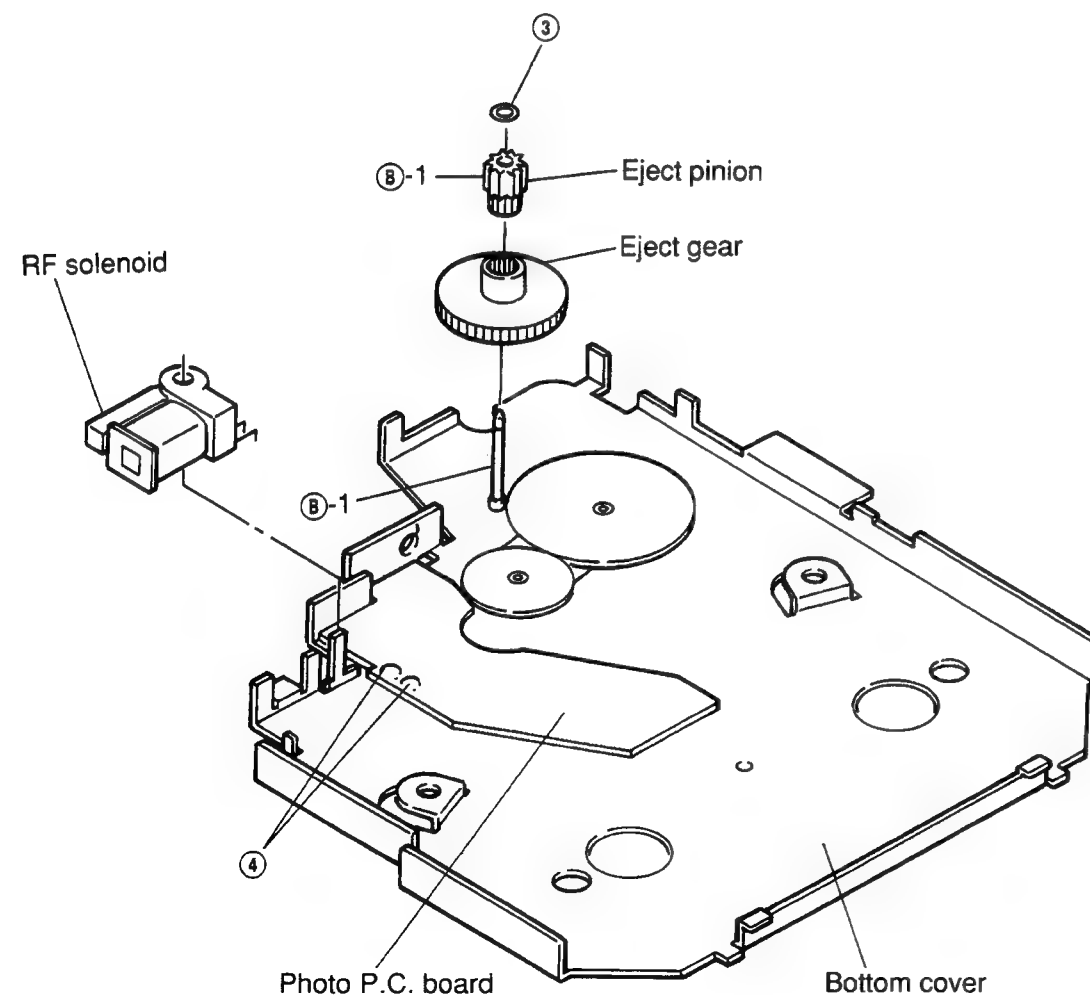


Figure 6

c. Replacement of the photo sensor

- (1) Remove four solders ⑤ as shown in Figure 7.
- (2) Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.
- (3) Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked ⑧-2 as shown in Figure 7.
- (4) Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by [] in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to $350^{\circ} \pm 10^{\circ}$ and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

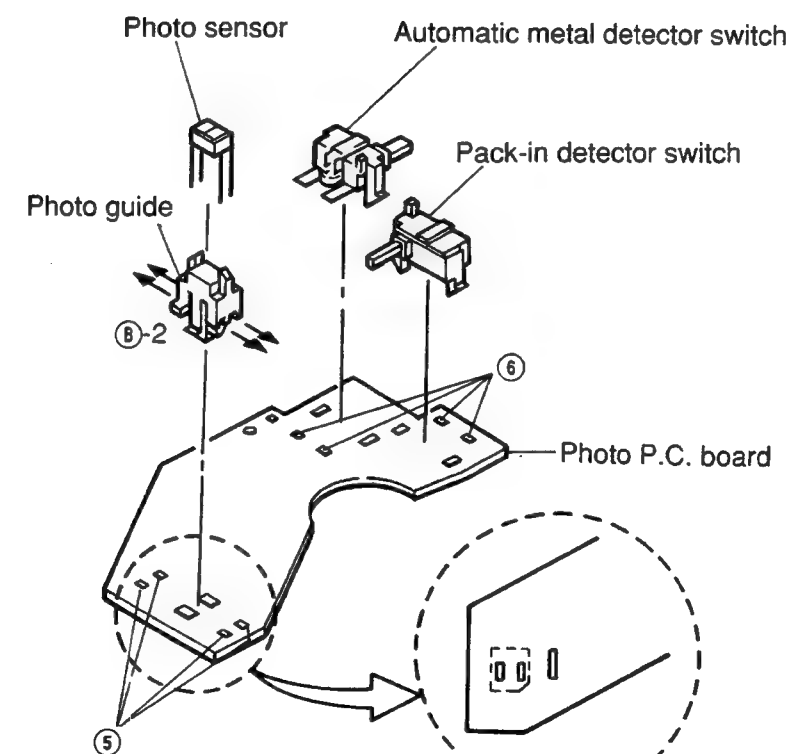


Figure 7

d. Replacement of the detector switch

(Automatic metal pack-in)

- (1) Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.
- (2) Prepare the terminals of the switch of the new solder as shown in Figure 8.
- (3) After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

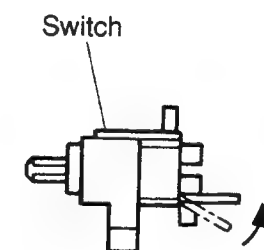


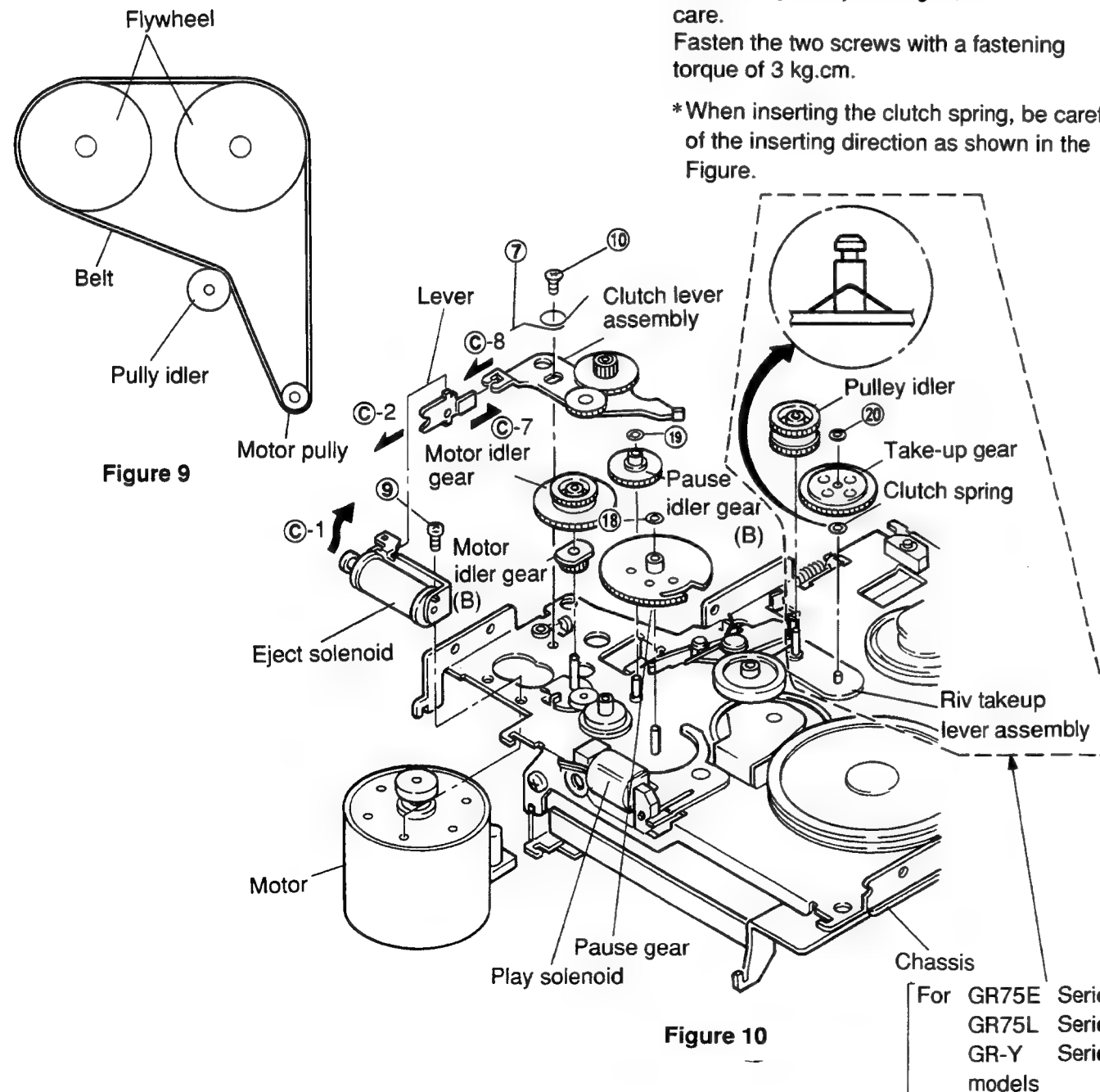
Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt

- (1) After removing the bottom cover, remove the belt.
- (2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.



b. Replacement of the motor

- (1) After removing the belt, remove spring ⑦ as shown in Figure 10.
- (2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.
- (3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)
- (4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care.
Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

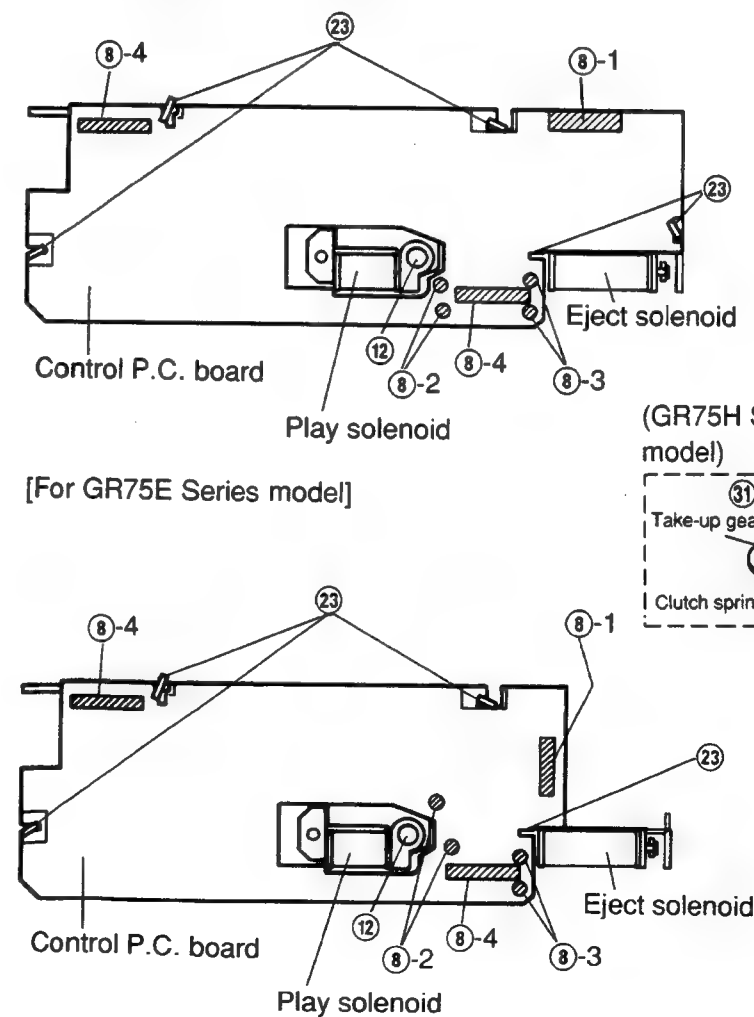
c. Replacement of the flywheels

- (1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)
- (2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

d. Replacement of the play solenoid

- (1) Remove the two solders ⑧-2 as shown in Figure 11.
- (2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.
- (3) Mount the new solenoid following the removal steps in the reverse order.

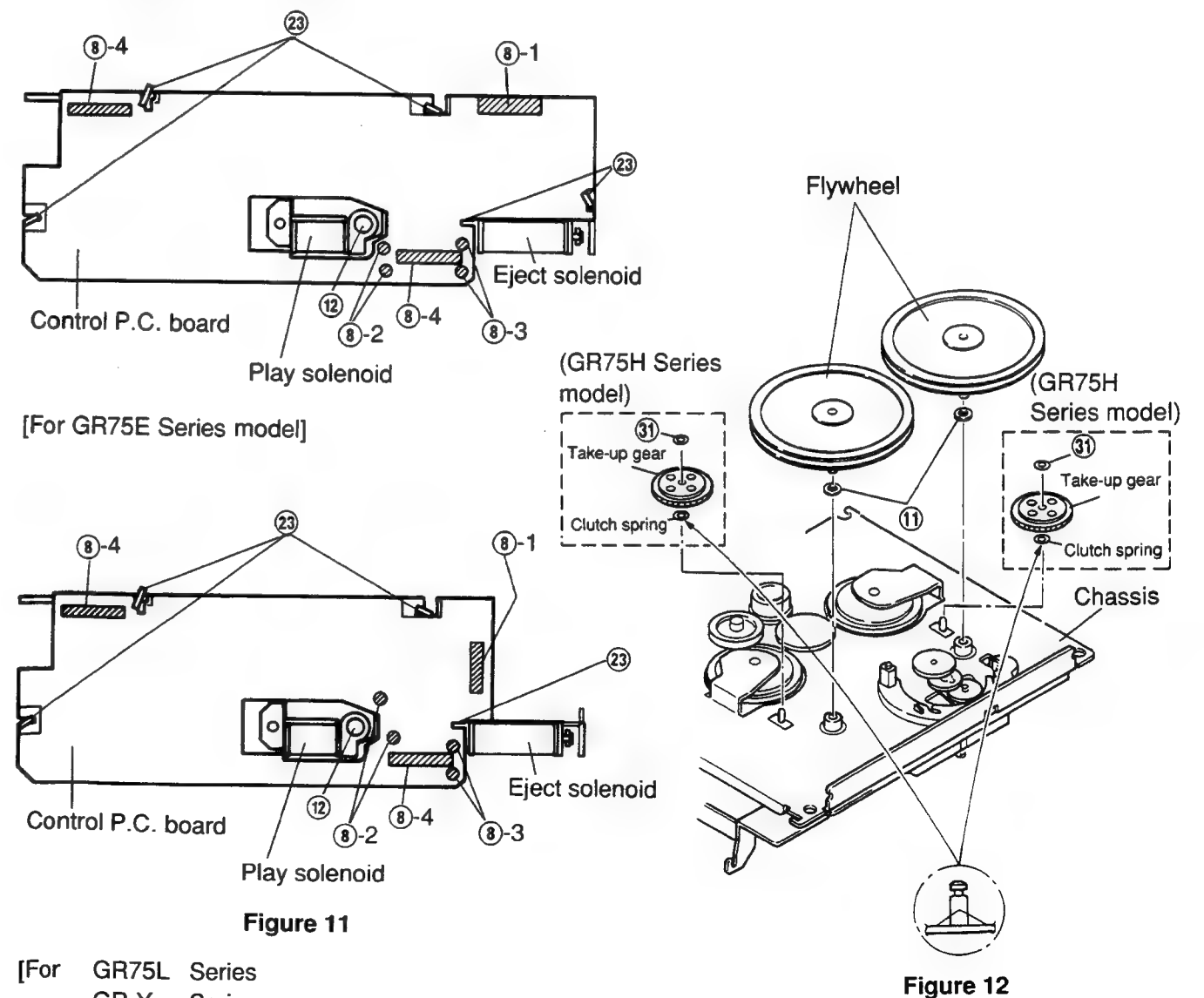
Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.



e. Replacement of the eject solenoid

- (1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)
- (2) Remove screw ⑨ and remove the solenoid as shown in Figure 10.
- (3) Align position ① of the new solenoid with position ② of the lever and fasten the screw as shown in Figure 10.
- (4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm. As the solenoid wires are not insulated, do not let them cross each other.



f. Replacement of gears

(f-1) Replacement of the reverse idler gear

- (1) Remove M1.2 lock washer ⑬, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
- (2) Remount following the removal steps in the reverse order.

(f-2) Replacement of the sun gear

- (1) Remove M1.2 lock washer ⑭, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
- (2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear

- (1) Adjust the two mounting claws for the fix gear on the chassis ⑮ and remove the section C-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.
- (2) Insert the section C-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear

- (1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.
- (2) Remove M1.7 lock washer ⑯ and remove the planet gear as shown in Figure 14.
- (3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:

After mounting all parts, check if the reverse lever moves in the directions marked C-5 when the reverse gear is turned clockwise and counterclockwise.

* After mounting the fixing gear, bend the claws ⑮ into the form of as shown in the Figure.

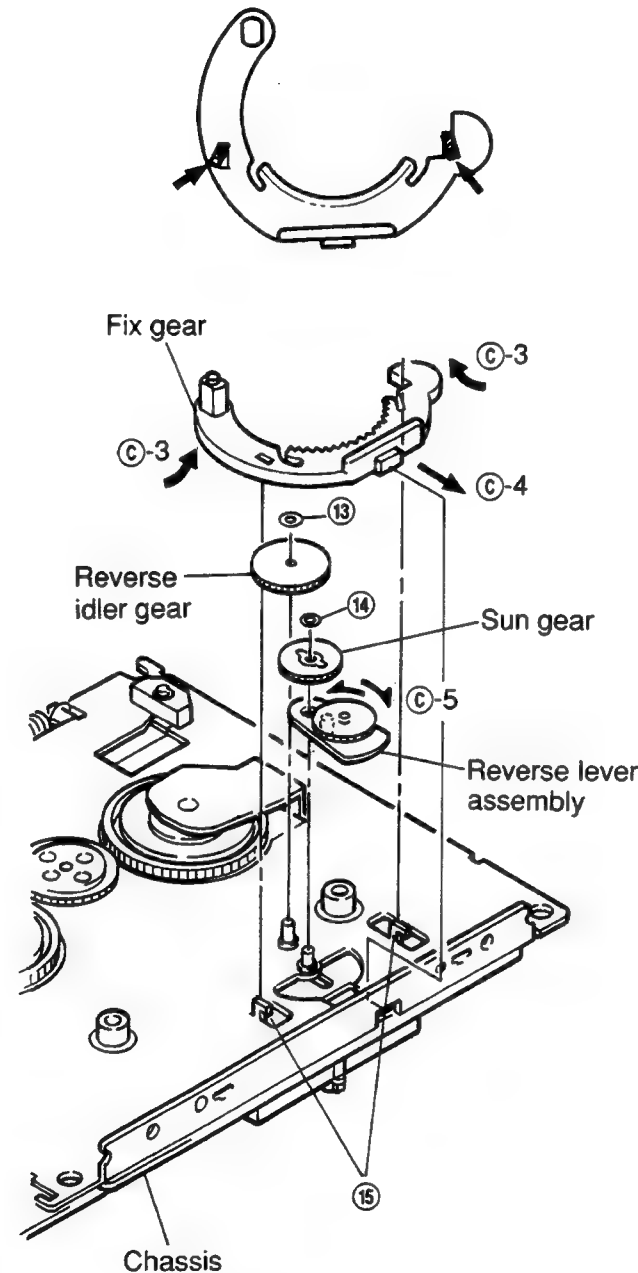


Figure 13

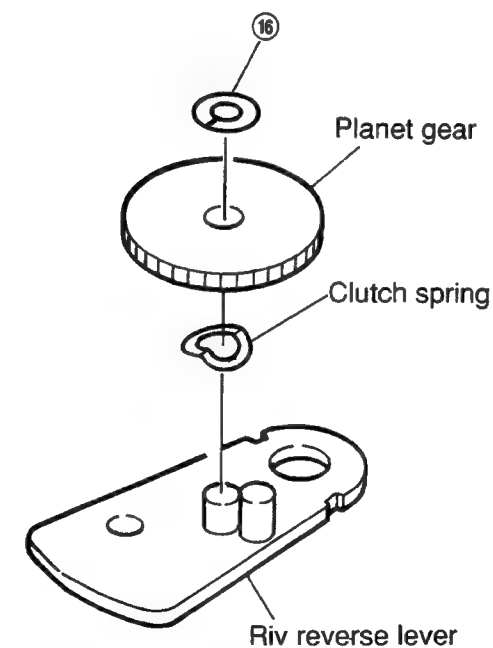
(f-5) Replacement of the clutch lever assembly and eject idler gear

- (1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.
- (2) Remove M1.2 lock washer ⑰ and remove the eject idler gear as shown in Figure 15.
- (3) Mount the new gears and clutch lever following the removal steps in the reverse order.

Note: When mounting the gears to the lever, apply grease (PG-671) to the position C-6 as shown in Figure 15. Align the position C-7 with the position C-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear

- (1) Remove M1.2 lock washer ⑱ and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.
- (2) Mount the new gear following the removal steps in the reverse order.



[Disassembly Reverse Lever Assembly]

Figure 14

(f-7) Replacement of the pause idler gear (B)

- (1) After removing the motor and the motor idler gear, remove M1.2 lock washer ⑲ and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.
- (2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear

- (1) After removing the belt and the pulley idler gear, remove M1.2 lock washer ⑳ by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10. After removing the Flywheel, remove M1.2 lock washer ㉑ and remove the gear by pulling it up from the stud of the chassis as shown in figure 12. [For GR75H Series model]
- (2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:

Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

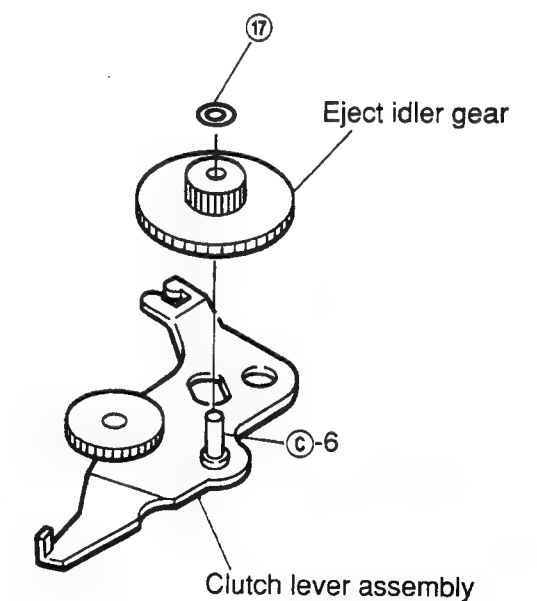


Figure 15

4. Replacement of the parts mounted on the front of the main chassis

a. Replacement of the audio P.C. board

- (1) Remove two solders ②① and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.
- (2) Adjust the two claws ②② to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.
- (3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

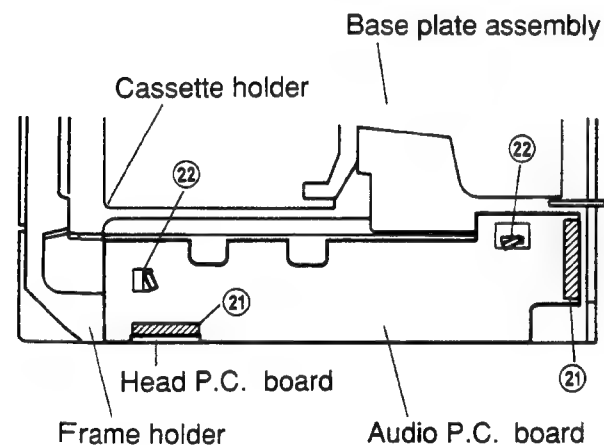


Figure 16

b. Replacement of the control P.C. board

- (1) Remove seven solders ⑧ and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.
- (2) Remove five claws ②③ and remove the P.C. board as shown in Figure 11. [For GR75E Series model] Remove four claws ②③ and remove the P.C. board as shown in Figure 11. [For GR75L Series, GR-Y Series, GR75H Series models]
- (3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

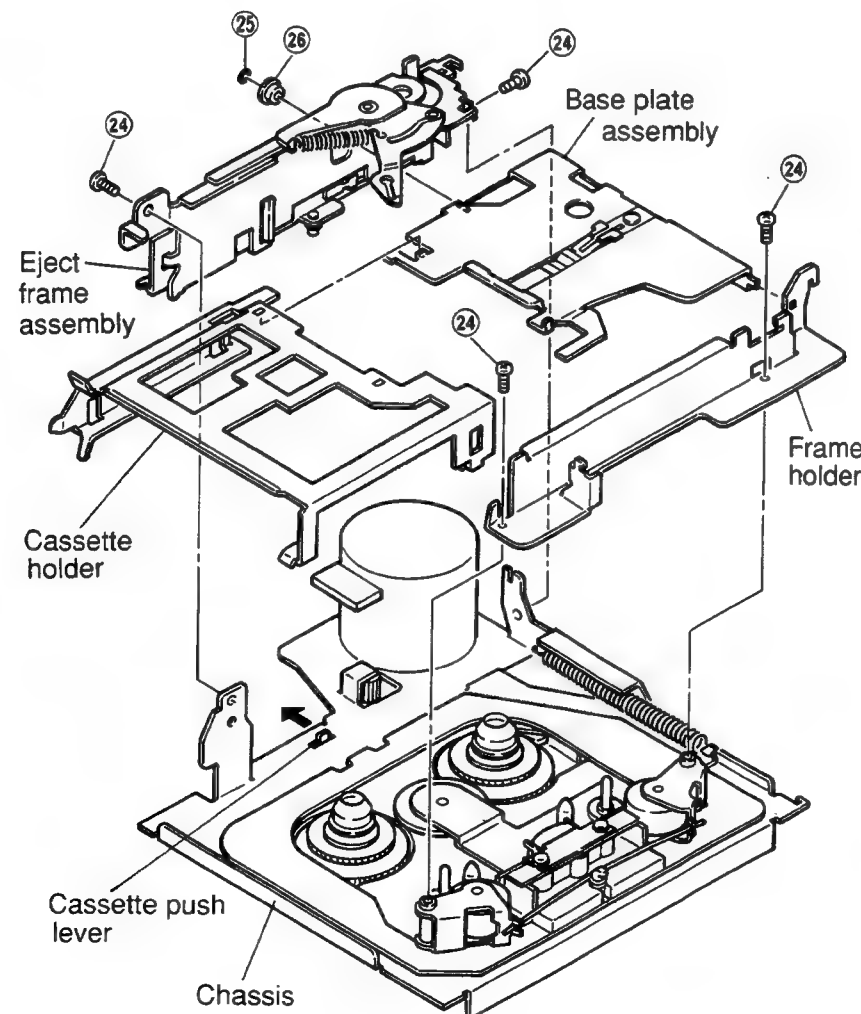


Figure 17

c. Disassembly and assembly of the cassette holder

- (1) Remove four screws ②④ and remove the eject frame assembly and the frame holder as shown in Figure 17.
- (2) Remove M1.2 lock washer ②⑤ and plate base roller ②⑥ and remove the cassette holder and the base plate assembly as shown in Figure 17.
- (3) Remount them following the removal steps in the reverse order.

- Notes:**
1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
 2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
 3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
 4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

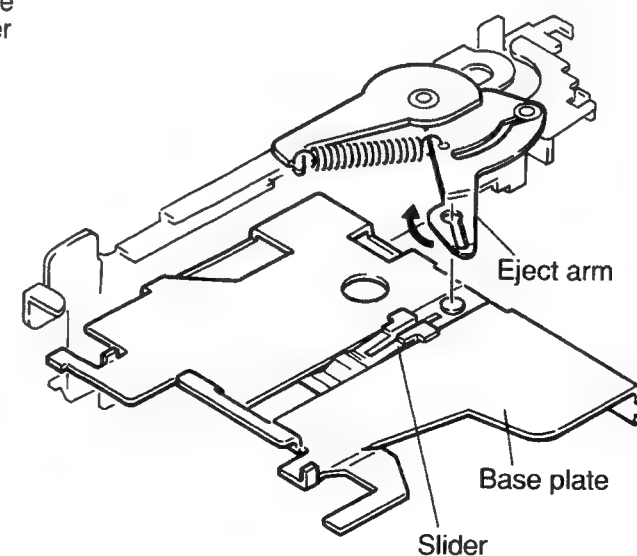


Figure 18

d. Replacement of the reels

- (1) Remove M1.7 two lock washers ②⑥ (Refer to figure 19).
- (2) Move the select lever in the direction marked ①-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.
- (3) After replacement, mount the new reels following the removal steps in the reverse order.
- (4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

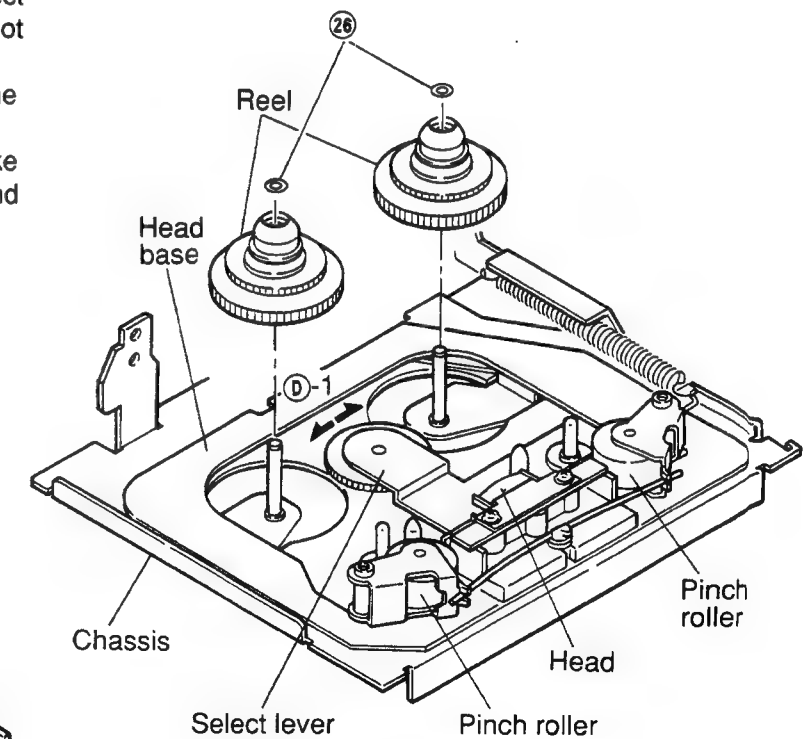


Figure 19

e. Replacement of the pinch rollers

- (1) Remove pinch roller spring ②⑦ as shown in Figure 20.
- (2) Remove M3.1 two lock washers ②⑧ and remove the pinch roller as shown in Figure 20.
- (3) Mount the pinch rollers following the removal steps in the reverse order. Apply insulation coating to the position ①-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

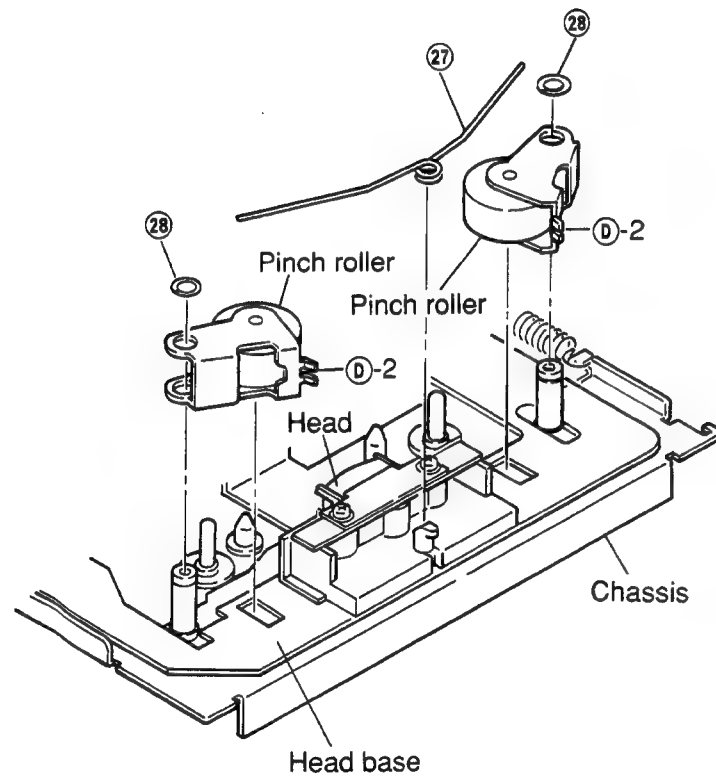


Figure 20

f. Replacement of the head

- (1) After removing the pinch roller spring, remove two screws ②⑨ as shown in Figure 21.
- (2) Remove solder ③⑩ and remove the head from the head P.C. board as shown in Figure 22.
- (3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.

2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

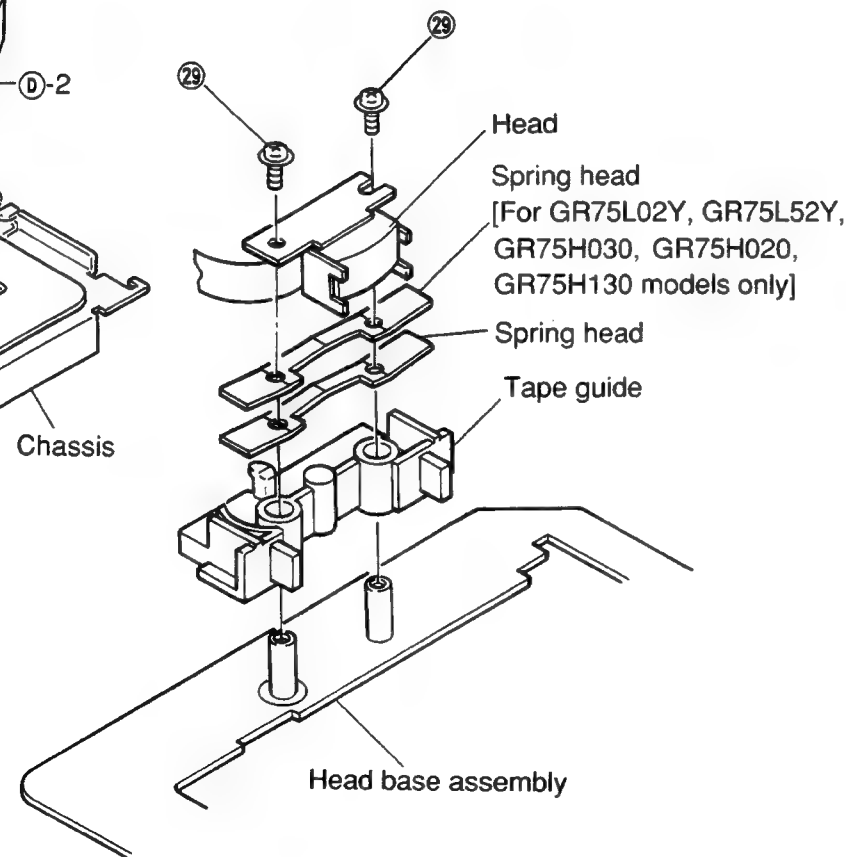


Figure 21

- (4) Adjust the height of the head as shown in Figures 23, 24 and 25.

- ① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.
- ② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm). If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

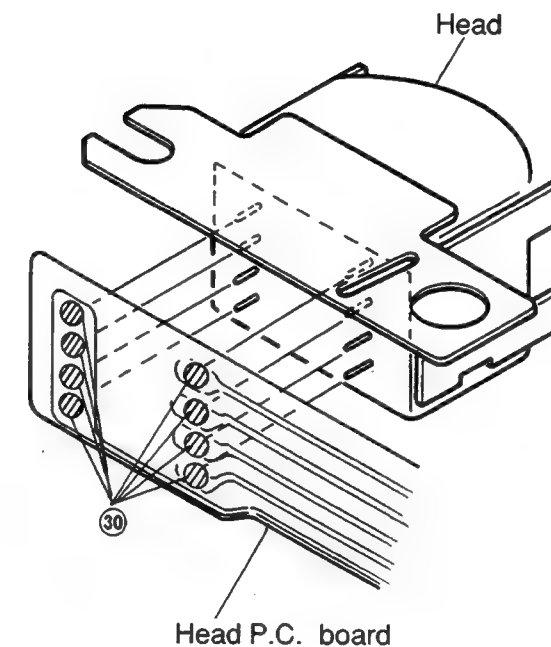


Figure 22

- (5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

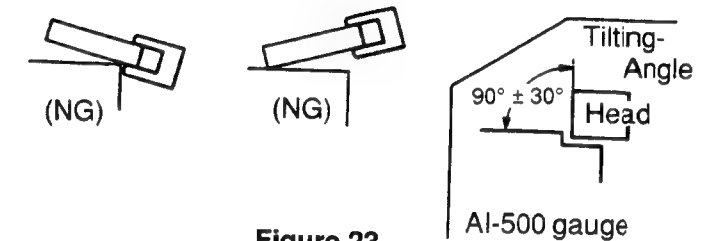


Figure 23

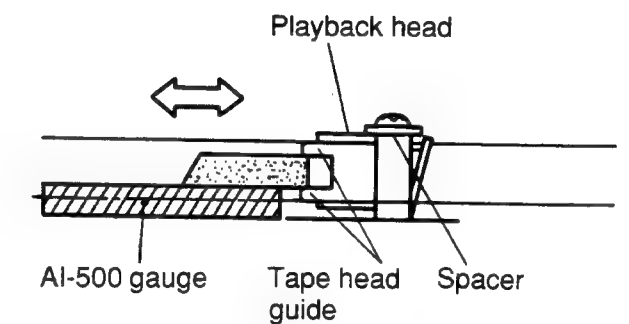
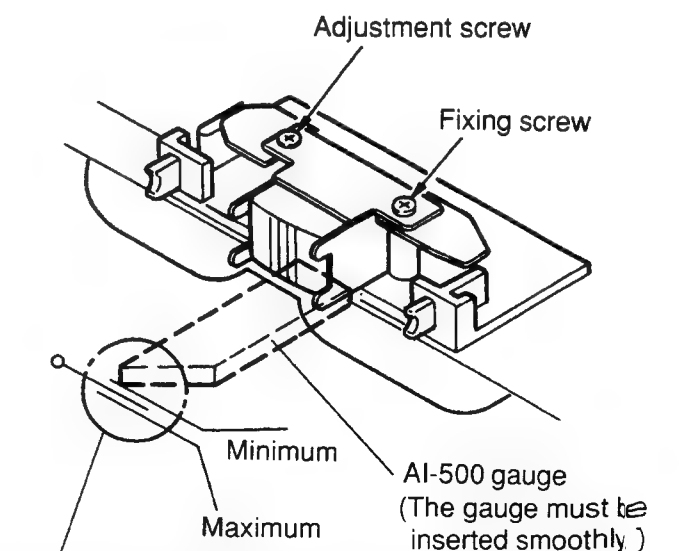


Figure 24



The nosepiece of the gauge must be between the minimum and maximum positions.

Figure 25

Exploded View (GR75E Series) (1/4)

● For GR75E010/01A/020 Models

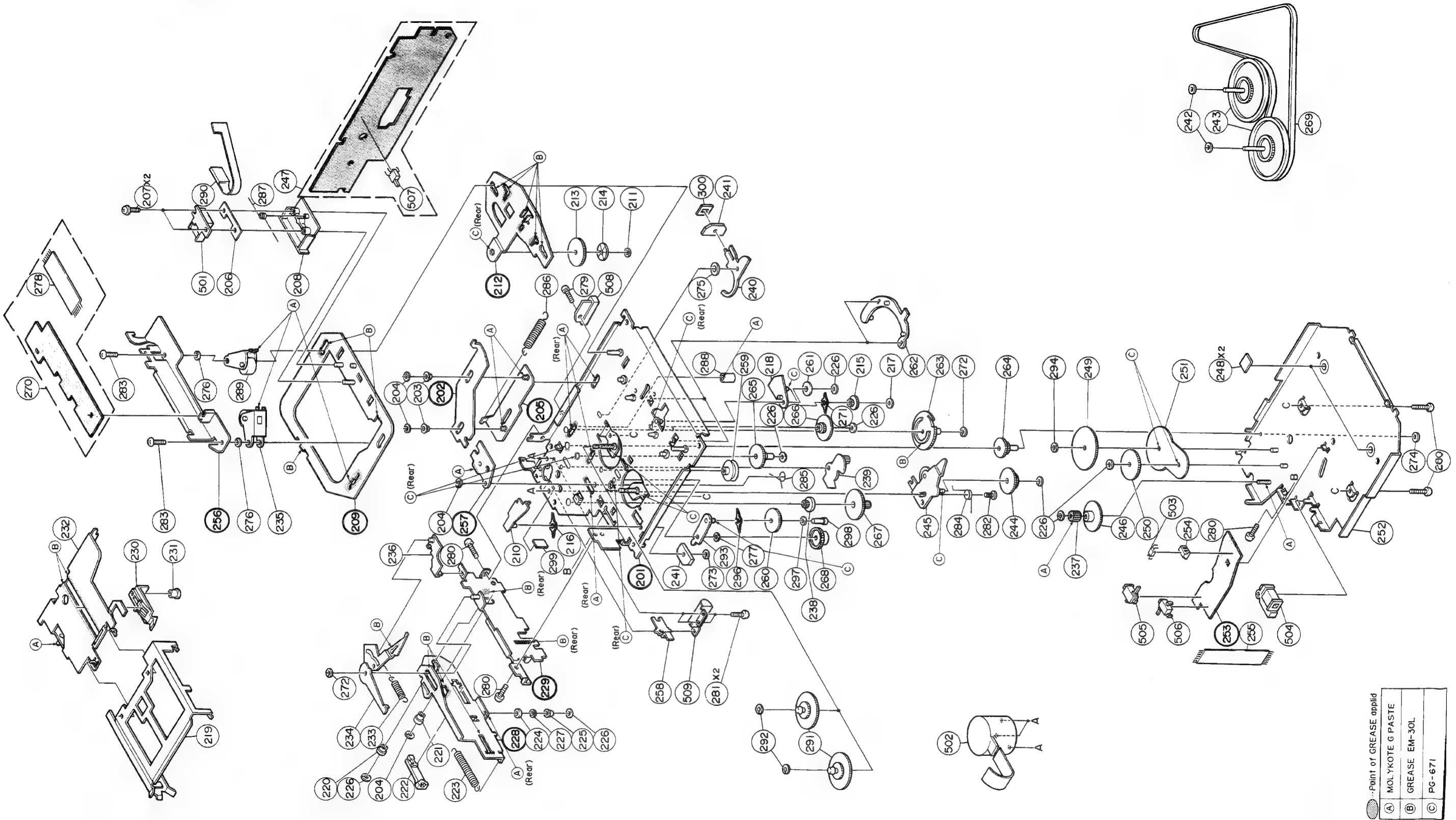
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| Point of GREASE applid | |
| (A) | MOLYKOTE G PASTE |
| (B) | GREASE EM-30L |
| (C) | PG-671 |

Cassette Deck Assembly Parts List (GR75E Series) (1/4)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|---------------------------|
| 203 | 3-C | 43A11072W01 | Roller, Sub Head |
| 204 | | 04B41345P01 | Washer, Lock(M1.2) |
| 206 | 2-B | 41A31756W01 | Spring, Head |
| 207 | 2-B | 03S40019G03 | Screw, F-Locks(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape, Guide |
| 210 | 4-C | 01A10206W01 | Assy., Riv Lever R/F Sol |
| 211 | 2-D | 04B41345P29 | Washer, Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear, Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A30480W01 | Gear, Planet |
| 216 | 3-E | 41A10097W02 | Spring, Clutch |
| 217 | 3-E | 04B41345P35 | Washer, Lock(M1.7) |
| 218 | 3-E | 01A30824W01 | Assy., Riv Lever Reverse |
| ● 219 | 4-B | 07B40283W01 | Holder, Cassette |
| ■ 219 | 4-B | 07B40283W01 | Holder, Cassette |
| ▲ 219 | 4-B | 07B10074W01 | Holder, Cassette |
| 220 | 5-B | 43A12583W01 | Roller, Eject |
| 221 | 5-C | 43A63281F01 | Roller, Plate Base |
| 222 | 5-C | 44A82206F01 | Rack |
| 223 | 5-C | 41B10386W03 | Spring, GR(Rack) |
| 224 | 4-C | 43A10121W01 | Roller, Eject A |
| 225 | 4-D | 43A10360W01 | Roller, Eject B |
| 226 | | 04B41345P11 | Washer, Lock(M1.2) |
| 227 | 4-D | 43A12377W01 | Roller, Eject C |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft, Slider |
| 232 | 4-A | 01A10212W01 | Assy., Riv Plate Base |
| 233 | 4-C | 41B10386W01 | Spring, Eject Arm |
| 234 | 4-B | 01A10148W01 | Assy., Riv Eject Arm A |
| 235 | 3-B | 01B30863W02 | Assy., Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever Pack In SW |
| 237 | 4-F | 44A12975W01 | Pinion, Eject |
| 238 | 4-E | 44A13617W01 | Gear, Motor Idler(B) |
| 239 | 3-E | 01A10201W02 | Assy., Riv Lever Pause |
| 240 | 2-D | 45A40725W01 | Lever, Play Sol |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer Polyslider (M2.1) |
| 243 | 1-G | 01A10368W01 | Assy., Flywheel |
| 244 | 3-F | 44A10141W01 | Gear, Eject Idler |
| 245 | 3-E | 01A10205W02 | Assy., Riv Lever Clutch A |

Notes: ● : For GR75E020 model only ■ : For GR75E010 model only
▲ : For GR75E01A model only Others : Common

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 246 | 3-F | 44A10145W01 | Gear, Eject |
| 247 | 2-B | 01V11500W18 | Assy., GR Control P.C. Board |
| 248 | 3-G | 43A41656W01 | Spacer, UHMW |
| 249 | 3-F | 44A11063W01 | Gear, Bottom A |
| 250 | 3-F | 44A11064W01 | Gear, Bottom B |
| 251 | 3-G | 34A11122W02 | Washer, GR |
| 252 | 3-H | 01A10210W02 | Assy., Riv. Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide, Photo |
| 255 | 4-G | 30T15126W01 | Wire, PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever, Eject Sol |
| 259 | 3-D | 49A10131W01 | Pulley, Idler |
| 260 | 4-E | 44A10133W01 | Gear, Take Up |
| 261 | 3-E | 44A10134W01 | Gear, Sun |
| 262 | 3-E | 44B10135W01 | Gear, Fix |
| 263 | 3-E | 44B30484W01 | Gear, Pause |
| 264 | 3-F | 44A10137W01 | Gear, Pause Idler A |
| 265 | 3-D | 44A10379W01 | Gear, Pause Idler B |
| 266 | 3-F | 44A10138W01 | Gear, Reverse Idler |
| 267 | 3-E | 44A10139W01 | Gear, Motor Idler |
| 268 | 4-E | 44A11062W01 | Gear, Reel Idler |
| 269 | 1-G | 42A10380W01 | Belt, GR |
| ● 270 | 3-A | 01V14700W68 | Assy., GR Audio P.C. Board |
| ■ 270 | 3-A | 01V11500W19 | Assy., GR Audio P.C. Board |
| ▲ 270 | 3-A | 01V11500W19 | Assy., GR Audio P.C. Board |
| 271 | 3-E | 41A30475W01 | Spring, Clutch |
| 272 | | 04B41345P15 | Washer, Lock(M1.2) |
| 273 | 4-D | 04B41345P02 | Washer, Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer, Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer, Lock(M3.1) |
| 276 | | 04B41345P32 | Washer, Lock(M3.1) |
| 277 | 4-E | 04B41345P37 | Washer, Lock(M2.1) |
| 278 | 2-A | 30T15126W02 | Wire, PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw, Pan(M2x6) |
| 280 | | 03S44205G30 | Screw, Pan(M2.6x4) |
| 281 | 4-D | 03S72235F53 | Screw, Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw, Eject Clutch (M2x2.3) |
| 283 | | 03S43997P64 | Screw, Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring, Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring, Cas Push |
| 286 | 2-C | 41B10386W02 | Spring, Sub Head |

| Symbol No. | IN-dex | Part No. | Description |
|---------------|--------|-------------|--------------------------------|
| 287 | 2-B | 41A10387W01 | Spring, Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller, Pause |
| 289 | 3-B | 01B30863W01 | Assy., Pinch Roller |
| 290 | 2-B | 84T25151W01 | Head P.C. Board |
| 291 | 4-E | 01T35403W01 | Assy., Reel |
| 292 | 4-E | 04B41345P12 | Washer, Lock(M1.7) |
| 293 | 4-D | 01A30161W01 | Assy., Riv Lever Take Up |
| 294 | 3-F | 04B41345P34 | Washer Lock(M1.2) |
| 296 | 4-D | 41A40910W01 | Spring, Clutch |
| 297 | 4-E | 43A41543W01 | Washer, Som(M1.2) |
| 298 | 3-E | 47A41458W01 | Pin, Take Up |
| 299 | 4-C | 43A40388W01 | Spacer, Polyslider |
| 300 | 2-D | 43A41744W01 | Lock, Solenoid |
| Miscellaneous | | | |
| ● 501 | 2-B | 88T15971W01 | Head |
| ■ 501 | 2-B | 88T10373W01 | Head |
| ▲ 501 | 2-B | 88T10373W01 | Head |
| 502 | 4-E | 01V11500W64 | Assy., Motor(Main. 13.2V-80mA) |
| 503 | 3-G | 51T15144W01 | Sensor, Photo |
| 504 | 4-G | 01T10371W01 | R/F Sol. Assy. |
| 505 | 4-F | 40T15382W01 | SW., Detector (Pack Down) |
| 506 | 4-G | 40T15382W01 | SW., Detector(Metal) |
| 507 | 2-C | 40T15222W01 | SW., Detector (Pack In) |
| 508 | 2-D | 01T15249W01 | Assy., Play Solenoid |
| 509 | 4-D | 01T10369W02 | Assy., Eject Solenoid |

Notes: ● : For GR75E020 model only ■ : For GR75E010 model only
▲ : For GR75E01A model only Others : Common

Exploded View (GR75L Series) (2/4)

● For GR75L020/02A Models

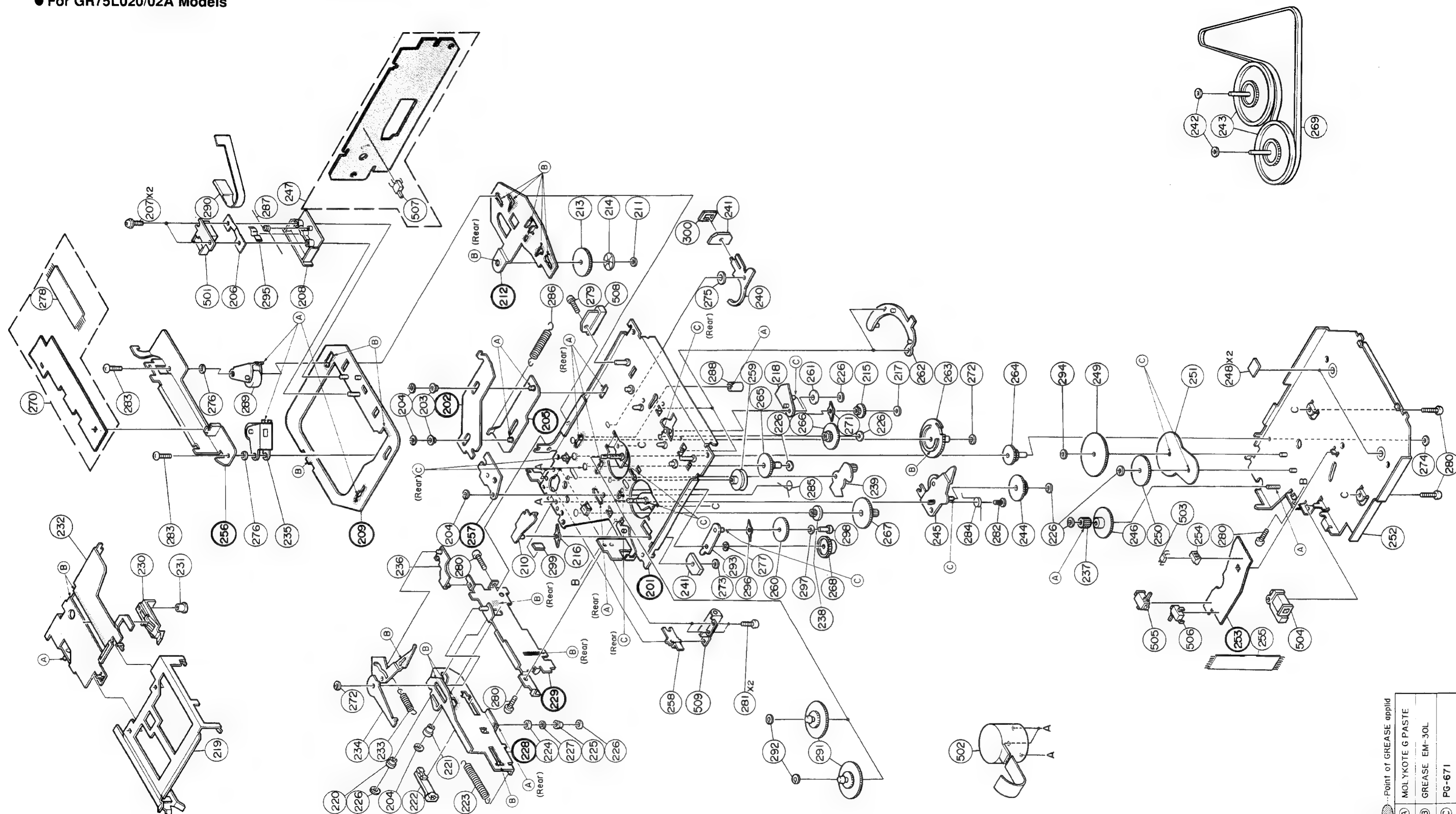
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|------------------------|------------------|
| Point of GREASE applid | |
| (A) | MOLYKOTE G PASTE |
| (B) | GREASE EM-30L |
| (C) | PG-671 |

Cassette Deck Assembly Parts List (GR75E Series) (2/4)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 203 | 3-C | 43A11072W01 | Roll. Sub Head |
| 204 | | 04B41345P01 | Washer. Lock(M1.2) |
| 206 | 2-B | 41A31756W01 | Spring. Head |
| 207 | 2-B | 03S40019G03 | Screw. F-Locks(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape. Guide |
| 210 | 4-C | 01A10206W01 | Assy.. Riv Lever R/F Sol. |
| 211 | 2-D | 04B41345P29 | Washer. Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear. Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A30480W01 | Gear. Planet |
| 216 | 3-E | 41A10097W02 | Spring. Clutch |
| 217 | 3-E | 04B41345P35 | Washer. Lock(M1.7) |
| 218 | 3-E | 01A30824W01 | Assy.. Riv Lever Reverse |
| 219 | 4-B | 07B40283W01 | Holder. Cassette |
| 220 | 5-B | 43A12583W01 | Roller. Eject |
| 221 | 5-C | 43A63281F01 | Roller. Plate Base |
| 222 | 5-C | 44A82206F01 | Rack |
| 223 | 5-C | 41B10386W03 | Spring. GR(Rack) |
| 224 | 4-C | 43A10121W01 | Roller. Eject(A) |
| 225 | 4-D | 43A10360W01 | Roller. Eject(B) |
| 226 | | 04B41345P11 | Washer. Lock(M1.2) |
| 227 | 4-D | 43A12377W01 | Roller. Eject(C) |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft. Slider |
| 232 | 4-A | 01A10212W01 | Assy.. Riv Plate Base |
| 233 | 4-C | 41B10386W01 | Spring. Eject Arm |
| 234 | 4-B | 01A21754W01 | Assy.. Riv Eject Arm(A) |
| 235 | 3-B | 01B30863W02 | Assy.. Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever. Pack In SW. |
| 237 | 4-F | 44A20314W01 | Pinion. Eject |
| 238 | 4-E | 44A13617W01 | Gear. Motor Idler(B) |
| 239 | 3-E | 01A10201W02 | Assy.. Riv Lever Pause |
| 240 | 2-E | 45A40725W01 | Lever. Play Sol |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer. Polyslider (M2.1) |
| 243 | 1-G | 01A10368W01 | Assy.. Flywheel |
| 244 | 3-F | 44A10141W01 | Gear. Eject Idler |
| 245 | 3-E | 01A10205W02 | Assy.. Riv Lever Clutch(A) |
| 246 | 3-F | 44A10145W01 | Gear. Eject |
| 247 | 2-B | 01V23700W03 | Assy.. GR Control P.C. Board |

Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 248 | 3-G | 43A41656W01 | Spacer. UHMW |
| 249 | 3-F | 44A11063W01 | Gear. Bottom(A) |
| 250 | 3-F | 44A11064W01 | Gear. Bottom(B) |
| 251 | 3-G | 34A11122W02 | Washer. GR |
| 252 | 3-H | 01A10210W02 | Assy.. Riv. Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide. Photo |
| 255 | 4-G | 30T15126W01 | Wire. PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever. Eject Sol. |
| 259 | 3-D | 49A10131W01 | Pulley. Idler |
| 260 | 4-E | 44A10133W01 | Gear. Take Up |
| 261 | 3-E | 44A10134W01 | Gear. Sun |
| 262 | 3-E | 44B10135W01 | Gear. Fix |
| 263 | 3-E | 44B21670W01 | Gear. Pause |
| 264 | 3-F | 44A10137W01 | Gear. Pause Idler(A) |
| 265 | 3-D | 44A10379W01 | Gear. Pause Idler(B) |
| 266 | 3-E | 44A10138W01 | Gear. Reverse Idler |
| 267 | 3-E | 44A10139W01 | Gear. Motor Idler |
| 268 | 4-E | 44A11062W01 | Gear. Reel Idler |
| 269 | 1-G | 42A10380W01 | Belt. GR |
| 270 | 3-A | 01V14700W68 | Assy.. GR Audio P.C. Board |
| 271 | 3-E | 41A30475W01 | Spring. Clutch |
| 272 | 3-F | 04B41345P15 | Washer. Lock(M1.2) |
| 273 | 4-D | 04B41345P02 | Washer. Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer. Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer. Lock(M3.1) |
| 276 | | 04B41345P32 | Washer. Lock(M3.1) |
| 277 | 4-E | 04B41345P37 | Washer. Lock(M2.1) |
| 278 | 2-A | 30T15126W02 | Wire. PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw. Pan(M2x6) |
| 280 | | 03S44205G30 | Screw. Pan(M2.6x4) |
| 281 | 4-D | 03S72235F53 | Screw. Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw. Eject Clutch (M2x2.3) |
| 283 | | 03S43997P64 | Screw. Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring. Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring. Cas. Push |
| 286 | 2-C | 41B10386W02 | Spring. Sub Head |
| 287 | 2-B | 41A10387W01 | Spring. Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller. Pause |
| 289 | 3-B | 01B30863W01 | Assy.. Pinch Roller |
| 290 | 2-B | 84T25151W01 | Head P.C. Board |

| Symbol No. | IN-dex | Part No. | Description | |
|---------------|--------|-------------|-----------------------------|---------------------------|
| 291 | 4-E | 01T35403W02 | Assy.. Reel | |
| 292 | 4-E | 04B41345P12 | Washer. Lock(M1.7) | |
| 293 | 4-D | 01A30161W01 | Assy.. Riv Lever Take Up | |
| 294 | 3-F | 04B41345P34 | Washer. Lock(M1.2) | |
| 295 | 2-B | 26A20537W01 | Shield. Plate | |
| 296 | 4-D | 41A40910W01 | Spring. Clutch | |
| 297 | 4-E | 43A41543W01 | Washer. Som(M1.2) | |
| 298 | 3-E | 47A41458W01 | Pin. Take Up | |
| 299 | 3-D | 43A40388W01 | Spacer. Polyslider | |
| 300 | 2-D | 43A41744W01 | Lock. Solenoid | |
| Miscellaneous | | | | |
| ◆ | 501 | 2-B | 88T15971W01 | Head |
| ○ | 502 | 4-E | 01V23900W60 | Assy.. Motor(13.2V-105mA) |
| | 502 | 4-E | 01V43400W37 | Assy.. Motor(13.2V-88mA) |
| | 503 | 3-G | 51T15144W01 | Sensor. Photo |
| | 504 | 4-G | 01T10371W01 | R/F Sol. Assy |
| | 505 | 4-F | 40T15382W01 | SW.. Detector (Pack Down) |
| | 506 | 4-G | 40T15382W01 | SW.. Detector (Metal) |
| | 507 | 2-C | 40T15222W01 | SW.. Detector (Pack In) |
| | 508 | 2-D | 01T15249W01 | Assy.. Play Solenoid |
| | 509 | 4-D | 01T10369W02 | Assy.. Eject Solenoid |

Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

Exploded View (GR-Y Series) (3/4)

● For GR75L02Y/52Y Model

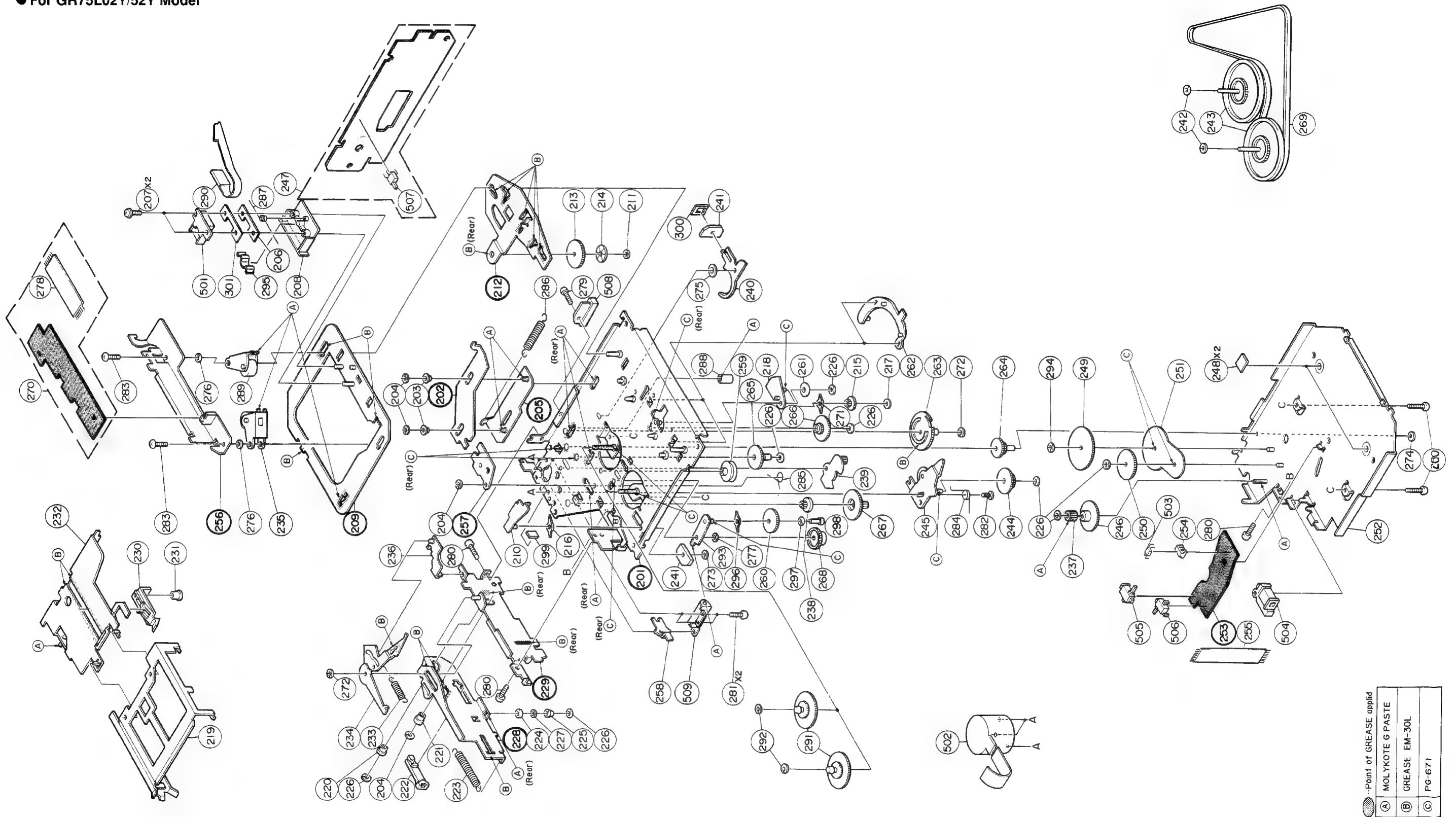
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Cassette Deck Assembly Parts List (GR-Y Series) (3/4)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 203 | 3-C | 43A11072W01 | Roll. Sub Head |
| 204 | | 04B41345P01 | Washer. Lock(M1.2) |
| 206 | 2-B | 41A31756W01 | Spring. Head |
| 207 | 2-B | 03S40019G03 | Screw. F-Locks(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape. Guide |
| 210 | 4-C | 01A10206W01 | Assy.. Riv Lever R/F Sol. |
| 211 | 2-D | 04B41345P29 | Washer. Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear. Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A30480W01 | Gear. Planet |
| 216 | | 41A10097W02 | Spring. Clutch |
| 217 | 3-E | 04B41345P35 | Washer. Lock(M1.7) |
| 218 | 3-E | 01A30824W01 | Assy.. Riv Lever Reverse |
| 219 | 4-B | 07B40283W01 | Holder. Cassette |
| 220 | 5-B | 43A12583W01 | Roller. Eject |
| 221 | 5-C | 43A63281F01 | Roller. Plate Base |
| 222 | 5-C | 44A82208F01 | Rack |
| 223 | 5-C | 41B10386W03 | Spring. GR(Rack) |
| 224 | 4-C | 43A10121W01 | Roller. Eject(A) |
| 225 | 4-D | 43A10380W01 | Roller. Eject(B) |
| 226 | | 04B41345P11 | Washer. Lock(M1.2) |
| 227 | 4-D | 43A12377W01 | Roller. Eject(C) |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft. Slider |
| 232 | 4-A | 01A10212W01 | Assy.. Riv Plate Base |
| 233 | 4-C | 41B10386W01 | Spring. Eject Arm |
| 234 | 4-B | 01A21754W01 | Assy.. Riv Eject Arm(A) |
| 235 | 3-B | 01B30863W02 | Assy.. Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever. Pack In SW. |
| 237 | 4-F | 44A20314W01 | Pinion. Eject |
| 238 | 4-E | 44A13617W01 | Gear. Motor Idler(B) |
| 239 | 3-E | 01A10201W02 | Assy.. Riv Lever Pause |
| 240 | 2-D | 45A40725W01 | Lever. Play Sol. |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer. Polyslider (M2.1) |
| 243 | 1-G | 01A10368W01 | Assy.. Flywheel |
| 244 | 3-F | 44A10141W01 | Gear. Eject Idler |
| 245 | 3-E | 01A10205W02 | Assy.. Riv Lever Clutch(A) |
| 246 | 3-F | 44A10145W01 | Gear. Eject |
| ☆ 247 | 2-B | 01V23700W03 | Assy.. GR Control P.C. Board |

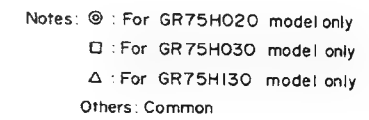
Notes:☆: For GR75L02Y model only ◇: For GR75L52Y model only
Others: Common

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| ◇ 247 | | 01V44200W74 | Assy.. GR Control P.C. Board |
| 248 | 3-G | 43A41656W01 | Spacer. UIMW |
| 249 | 3-F | 44A11063W01 | Gear. Bottom(A) |
| 250 | 3-F | 44A11064W01 | Gear. Bottom(B) |
| 251 | 3-G | 34A11122W02 | Washer. GR |
| 252 | 3-H | 01A10210W02 | Assy.. Riv. Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide. Photo |
| 255 | 4-G | 30T15126W01 | Wire. PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever. Eject Sol. |
| 259 | 3-D | 49A10131W01 | Pulley. Idler |
| 260 | 4-E | 44A10133W01 | Gear. Take Up |
| 261 | 3-E | 44A10134W01 | Gear. Sun |
| 262 | 3-E | 44B10135W01 | Gear. Fix |
| 263 | 3-E | 44B21670W01 | Gear. Pause |
| 264 | 3-F | 44A10137W01 | Gear. Pause Idler(A) |
| 265 | 3-D | 44A10379W01 | Gear. Pause Idler(B) |
| 266 | 3-E | 44A10138W01 | Gear. Reverse Idler |
| 267 | 3-E | 44A10139W01 | Gear. Motor Idler |
| 268 | 4-E | 44A11062W01 | Gear. Reel Idler |
| 269 | 1-G | 42A10380W01 | Belt. GR |
| 270 | 3-A | 01V33300W03 | Assy.. GR Audio P.C. Board |
| 271 | 3-E | 41A30475W01 | Spring. Clutch |
| 272 | 3-F | 04B41345P15 | Washer. Lock(M1.2) |
| 273 | | 04B41345P02 | Washer. Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer. Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer. Lock(M3.1) |
| 276 | 3-B | 04B41345P32 | Washer. Lock(M3.1) |
| 277 | 4-E | 04B41345P37 | Washer. Lock(M2.1) |
| 278 | 2-A | 30T15126W02 | Wire. PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw. Pan(M2x6) |
| 280 | | 03S44205G30 | Screw. Pan(M2.6x4) |
| 281 | 4-D | 03S72235F53 | Screw. Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw. Eject Clutch (M2x2.3) |
| 283 | | 03S43997P64 | Screw. Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring. Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring. Cas. Push |
| 286 | 2-C | 41B10386W02 | Spring. Sub Head |
| 287 | 2-B | 41A10387W01 | Spring. Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller. Pause |
| 289 | 3-B | 01B30863W01 | Assy.. Pinch Roller |
| 290 | 2-B | 84T35271W01 | Head P.C. Board |

| Symbol No. | IN-dex | Part No. | Description |
|---------------|--------|-------------|---------------------------|
| 291 | 4-E | 01T35403W02 | Assy.. Reel |
| 292 | 4-E | 04B41345P12 | Washer. Lock(M1.7) |
| 293 | 4-D | 01A30161W01 | Assy.. Riv Lever Take Up |
| 294 | 3-F | 04B41345P34 | Washer. Lock(M1.2) |
| 295 | 2-B | 26A20537W01 | Shield. Plate |
| 296 | 4-D | 41A40910W01 | Spring. Clutch |
| 297 | 4-E | 43A41543W01 | Washer. Som(M1.2) |
| 298 | 3-E | 47A41458W01 | Pin. Take Up |
| 299 | 3-C | 43A40388W01 | Spacer. Polyslider |
| 300 | 2-D | 43A41744W01 | Lock. Solenoid |
| 301 | 2-B | 41A41416W01 | Spring. Head |
| Miscellaneous | | | |
| 501 | 2-B | 88T15971W01 | Head |
| ☆ 502 | 4-E | 01V23900W60 | Assy.. Motor(13.2V-105mA) |
| ◇ 502 | 4-E | 01V44200W73 | Assy.. Motor(13.2V-80mA) |
| 503 | 3-G | 51T15144W01 | Sensor. Photo |
| 504 | 4-G | 01T10371W01 | R/F Sol. Assy |
| 505 | 4-F | 40T15382W01 | SW.. Detector (Pack Down) |
| 506 | 4-G | 40T15382W01 | SW.. Detector (Metal) |
| 507 | 2-C | 40T15222W01 | SW.. Detector (Pack In) |
| 508 | 2-D | 01T15249W01 | Assy.. Play Solenoid |
| 509 | 4-D | 01T10369W02 | Assy.. Eject Solenoid |

Notes:☆: For GR75L02Y model only ◇: For GR75L52Y model only
Others: Common

● For GR75H030/020/130 Model



| | |
|-----|------------------|
| (A) | MOLYKOTE G PASTE |
| (B) | GREASE EM-30L |
| (C) | PG-67I |

Cassette Deck Assembly Parts List (GR75H Series) (4/4)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|--------------------------|
| 203 | 3-C | 43A31453W01 | Roller, Sub Head |
| 204 | | 04B41345P01 | Washer, Lock(M1.2) |
| 206 | 2-B | 41A31756W01 | Spring, Head |
| 207 | 2-A | 03A38021W01 | Screw, Flange(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape, Guide |
| 210 | 4-C | 01A30462W01 | Assy., Riv Lever R/F Sol |
| 211 | 2-D | 04B41345P29 | Washer, Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear, Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A30480W01 | Gear, Planet |
| 216 | | 41A30475W01 | Spring, Clutch |
| 218 | 3-E | 01A30824W01 | Assy., Riv Lever Reverse |
| ◎ 219 | 4-B | 07B40283W01 | Holder, Cassette |
| □ 219 | 4-B | 07B40283W01 | Holder, Cassette |
| △ 219 | 4-B | 07B40012W01 | Holder, Cassette |
| 220 | 5-B | 43A12583W01 | Roller, Eject |
| 221 | 5-C | 43A63281F01 | Roller, Plate Base |
| 222 | 5-C | 44A82206F01 | Rack |
| ◎ 223 | 5-C | 41B10386W03 | Spring, GR(Rack) |
| □ 223 | 5-C | 41B10386W03 | Spring, GR(Rack) |
| △ 223 | 5-C | 41B10386W04 | Spring, GR(Rack) |
| 224 | 5-C | 43A10121W01 | Roller, Eject A |
| 225 | 5-D | 43A10360W01 | Roller, Eject B |
| 226 | | 04B41345P11 | Washer, Lock(M1.2) |
| 227 | 5-D | 43A12377W01 | Roller, Eject C |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft, Slider |
| ◎ 232 | 4-A | 01A10212W01 | Assy., Riv Plate Base |
| □ 232 | 4-A | 01A10212W01 | Assy., Riv Plate Base |
| △ 232 | 4-A | 01A40024W01 | Assy., Riv Plate Base |
| ◎ 233 | 5-C | 41B10386W01 | Spring, Eject Arm |
| □ 233 | 5-C | 41B10386W01 | Spring, Eject Arm |
| △ 233 | 5-C | 41B63283F11 | Spring |
| ◎ 234 | 5-C | 01A30883W01 | Assy., Riv Eject Arm B |
| □ 234 | 5-C | 01A30883W01 | Assy., Riv Eject Arm B |
| △ 234 | 5-C | 01A40021W01 | Assy., Riv Eject Arm D |
| 235 | 3-B | 01B30863W02 | Assy., Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever Pack In SW |
| 237 | 4-F | 44A20314W01 | Pinion, Eject |
| 238 | 2-B | 26A20537W01 | Shield, plate |
| 239 | 5-D | 01A40881W01 | Assy., Riv RF Link |
| 240 | 2-D | 45A40725W01 | Lever, Play Sol. |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer, Polyslider(M2.1) |
| 243 | 1-G | 01A30488W01 | Assy., Flywheel |

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 244 | 3-F | 44A10141W01 | Gear, Eject Idler |
| 245 | 3-E | 01A10205W02 | Assy., Riv Lever Clutch A |
| 246 | 3-F | 44A10145W01 | Gear, Eject |
| 247 | 2-B | 01V33500W45 | Assy., GR Control P.C. Board |
| 248 | 3-G | 43A41656W01 | Spacer, UHMW |
| 249 | 5-D | 44A30481W01 | Gear, RF Idler |
| 250 | 4-D | 44A30483W01 | Gear, RF |
| 251 | 4-D | 04S40075G58 | Washer, Polyslider(M2.1) |
| 252 | 3-H | 01A30463W01 | Assy., Riv, Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide, Photo |
| 255 | 4-G | 30T15126W01 | Wire, PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever, Eject Sol |
| 259 | 3-D | 49A30476W01 | Pulley, Idler |
| 260 | 4-E | 44A30482W01 | Gear, Take Up |
| 261 | 3-E | 44A30478W01 | Gear, Sun |
| 262 | 3-E | 44B10135W01 | Gear, Fix |
| 263 | 3-E | 44B30484W01 | Gear, Pause |
| 264 | 3-F | 44A10137W01 | Gear, Pause Idler A |
| 265 | 3-E | 44A30486W01 | Gear, Pause Idler B |
| 266 | 3-E | 44A30479W01 | Gear, Reverse Idler |
| 267 | 2-E | 44A30485W01 | Gear, Motor Idler |
| 268 | 2-E | 44A30487W01 | Gear, Motor Clutch |
| 269 | 1-G | 42A31850W01 | Belt, GR |
| ◎ 270 | 3-A | 01V43400W38 | Assy., GR Audio P.C. Board |
| □ 270 | 3-A | 01V33300W03 | Assy., GR Audio P.C. Board |
| △ 270 | 3-A | 01V33300W03 | Assy., GR Audio P.C. Board |
| 272 | 3-F | 04B41345P15 | Washer, Lock(M1.2) |
| 273 | | 04B41345P02 | Washer, Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer, Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer, Lock(M3.1) |
| 276 | 3-B | 04B41345P32 | Washer, Lock(M3.1) |
| 277 | 2-E | 01A30464W01 | Assy., Riv Play Clutch |
| 278 | 2-A | 30T15126W02 | Wire, PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw, Pan(M2x6) |
| 280 | | 03S44205G30 | Screw, Pan(M2.6x4) |
| 281 | 4-D | 03S72235F53 | Screw, Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw, Eject Clutch(Mx2.3) |
| 283 | | 03S43997P64 | Screw, Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring, Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring, Cas Push |
| 286 | 2-C | 41B10386W02 | Spring, Sub Head |
| 287 | 2-B | 41A10387W01 | Spring, Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller, Pause |
| 289 | 3-B | 01B30863W01 | Assy., Pinch Roller |
| ◎ 290 | 2-B | 84T25151W01 | Head P.C. Board |

Notes: ◎ : For GR75H020 model only □ : For GR75H030 model only
△ : For GR75H130 model only Others : Common

| Symbol No. | IN- dex | Part No. | Description |
|------------------------------|------------|-------------|-----------------------|
| <input type="checkbox"/> 290 | 2-B | 84T35271W01 | Head P.C. Board |
| <input type="checkbox"/> 290 | 2-B | 84T35271W01 | Head P.C. Board |
| <input type="checkbox"/> 291 | 5-E | 01T35403W01 | Assy.. Reel |
| <input type="checkbox"/> 292 | 5-E | 04B41345P12 | Washer. Lock(M1.7) |
| <input type="checkbox"/> 293 | 2-D | 04B41345P35 | Washer. Lock(M1.7) |
| <input type="checkbox"/> 294 | 2-E | 43A30827W01 | Spacer. Motor Idler |
| <input type="checkbox"/> 295 | 2-E | 41A30490W01 | Spring. Play Clutch |
| <input type="checkbox"/> 296 | 5-D | 01A40882W01 | Assy.. Riv Lever RF |
| <input type="checkbox"/> 297 | 2-D | 34A48030W01 | Washer. Solenoid |
| <input type="checkbox"/> 298 | 3-E | 01A10201W02 | Assy. Riv Lever Pause |
| <input type="checkbox"/> 299 | 4-C | 43A40388W01 | Spacer. Polyslider |
| <input type="checkbox"/> 300 | 2-B | 41A41416W01 | Spring. Head |
| <input type="checkbox"/> 300 | 2-B | 41A41416W01 | Spring. Head |

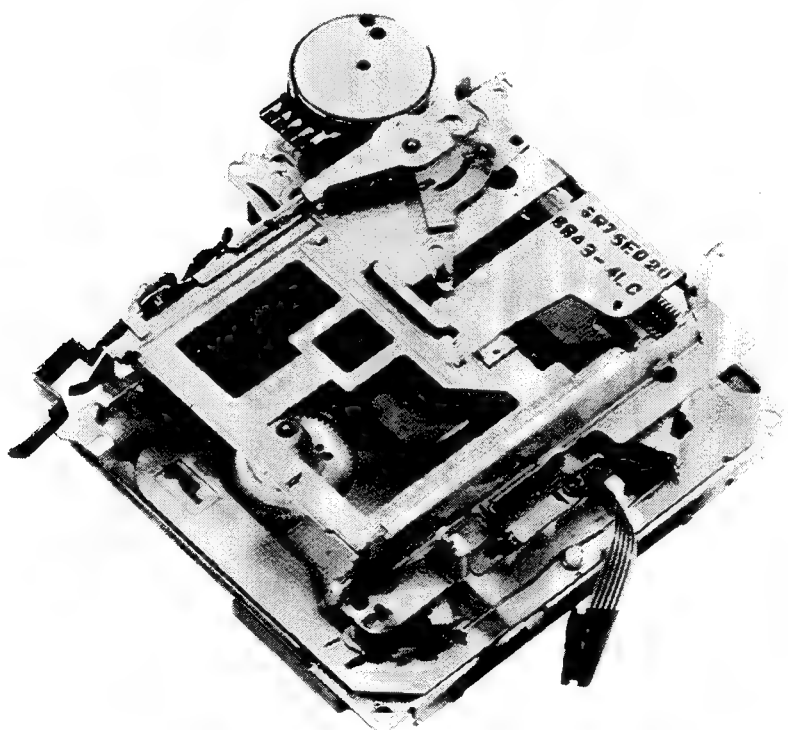
Miscellaneous

| | | | |
|---|-----|-------------|------------------------------|
| <input checked="" type="checkbox"/> 501 | 2-B | 88T15971W01 | Head |
| <input type="checkbox"/> 501 | 2-B | 88T35406W01 | Head |
| <input type="checkbox"/> 501 | 2-B | 88T35406W01 | Head |
| <input type="checkbox"/> 502 | 5-F | 01V41100W72 | Assy.. Motor(11.5v-85mA) |
| <input type="checkbox"/> 503 | 3-G | 51T15144W01 | Sensor. Photo |
| <input type="checkbox"/> 504 | 4-G | 01T10371W01 | R/F Sol. Assy. |
| <input type="checkbox"/> 505 | 4-F | 40T15382W01 | SW.. Detector (Pack Down) |
| <input type="checkbox"/> 506 | 4-G | 40T15382W01 | SW.. Detector(Metal) |
| <input type="checkbox"/> 507 | 2-C | 40T15222W01 | SW.. Detector (Pack In) |
| <input type="checkbox"/> 508 | 2-D | 01T15249W01 | Assy.. Play Solenoid |
| <input type="checkbox"/> 509 | 4-D | 01T10369W02 | Assy.. Eject Solenoid |

ALPINE SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (III)



GR/GR-Y SERIES

Contents

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Memo

List of Usable Lock Washers

| | SIZE | PARTS NO. | QUANTITY | | |
|----|---------------------|-------------|--------------|--------------|-------------|
| | | | GR75E Series | GR75L Series | GR-Y Series |
| 1 | (M1.2 × 3.5 × 0.25) | 04B41345P01 | 8 | 7 | 6 |
| 2 | (M1.7 × 3.5 × 0.25) | 04B41345P02 | 1 | 1 | 2 |
| 3 | (M2.1 × 5 × 0.25) | 04B41345P06 | 1 | 1 | 0 |
| 4 | (M1.2 × 2.5 × 0.25) | 04B41345P11 | 7 | 7 | 8 |
| 5 | (M1.7 × 3.5 × 0.35) | 04B41345P12 | 2 | 2 | 2 |
| 6 | (M1.2 × 3.5 × 0.35) | 04B41345P15 | 1 | 1 | 1 |
| 7 | (M1 × 2.5 × 0.25) | 04B41345P17 | 1 | 1 | 1 |
| 8 | (M2.6 × 5 × 0.25) | 04B41345P29 | 1 | 1 | 0 |
| 9 | (M3.1 × 8 × 0.05) | 04B41345P30 | 1 | 1 | 1 |
| 10 | (M1.7 × 3 × 0.25) | 04B41345P31 | 1 | 1 | 1 |
| 11 | (M3.1 × 5 × 0.35) | 04B41345P32 | 2 | 2 | 2 |
| 12 | (M1.2 × 2.5 × 0.3) | 04B41345P34 | 1 | 1 | 0 |
| 13 | (M2.1 × 4 × 0.25) | 04B41345P37 | 0 | 0 | 1 |
| 14 | (M2.6 × 4.7 × 0.25) | 04B41345P38 | 0 | 0 | 1 |

List of Usable Oil

- 1) Molykote E paste
- 2) Grease EM-30L
- 3) Grease FLOIL 425A

List of Usable Jigs

- 1) GR bottom gear jig (Part No. 44A20788W01)
- 2) Head height adjustment gauge AI-500 (Part No. AI-500)

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

- (1) Turn the mechanism around as shown in Figure 1.
- (2) Remove M1 lock washer ① as shown in Figure 1.
- (3) Remove three screws ② as shown in Figure 1.
- (4) Lift the bottom cover slowly from the position ①-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
- (5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
- (6) Slide the slider in the direction ①-2 as shown in Figure 2.
- (7) Push down the cassette holder in the direction ①-3 as shown in Figure 2.
- (8) Pull the door pin in the direction ①-4 so that the mechanism is locked in as shown in Figure 2.
- (9) Turn the mechanism around as shown in Figure 3.
- (10) Pull the automatic metal lever in the direction ①-5 and the RF solenoid chip in the direction ①-6 as shown in Figure 3.
- (11) Insert the hooks of the bottom cover into the chassis in the direction ①-7, and then join the part ①-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
- (12) Since the hooks marked ①-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole ①-9, and fix it turning the jig slightly in the direction ①-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
- (13) Fix the screws and the lock washer that have been removed.

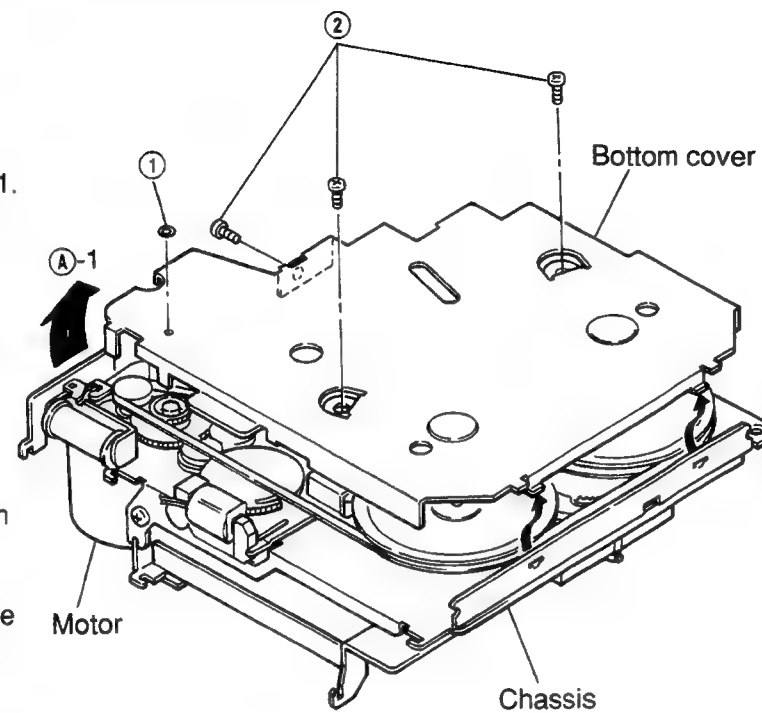


Figure 1

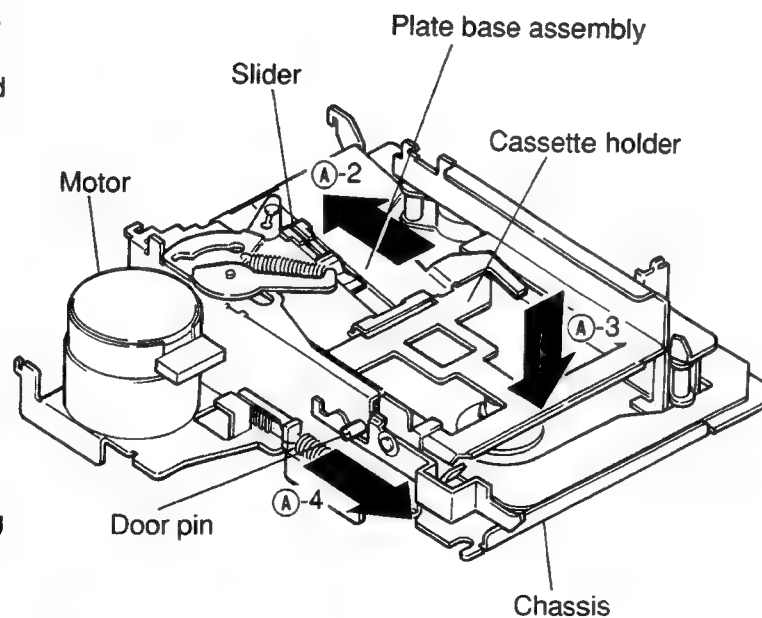


Figure 2

- (14) Insert the jig into the hole ①-9 as shown in Figure 4 and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction ①-10 with the finger. Then the eject operation is completed. Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

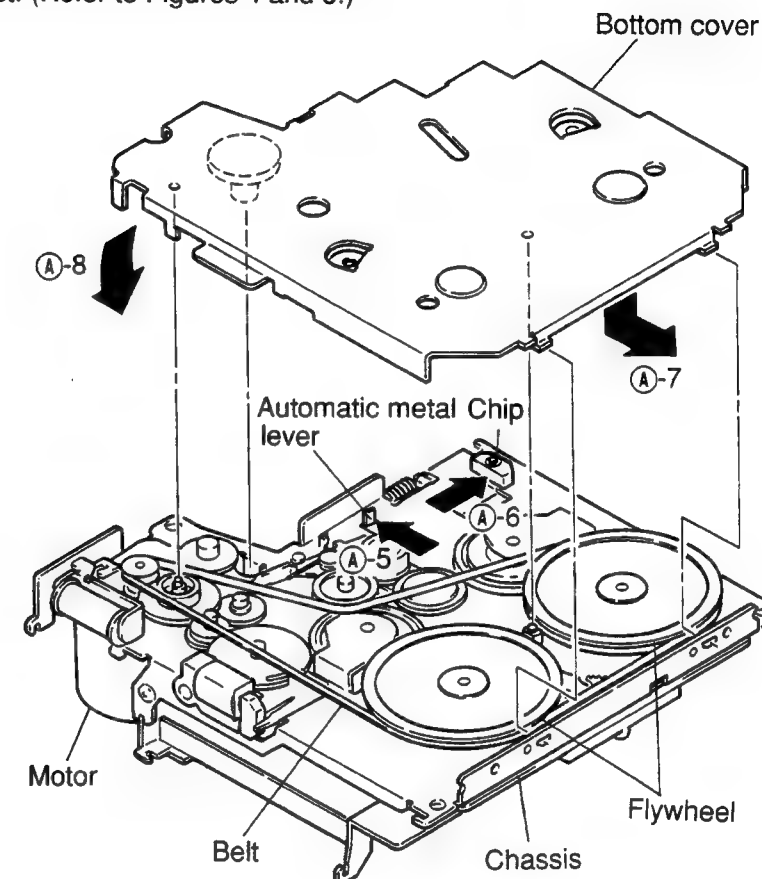


Figure 3

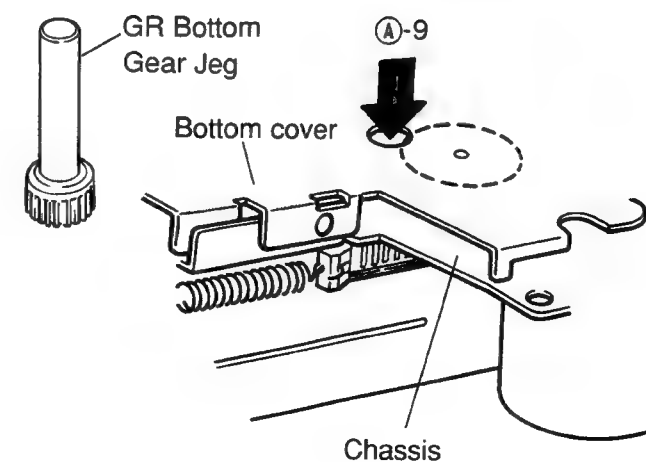


Figure 4

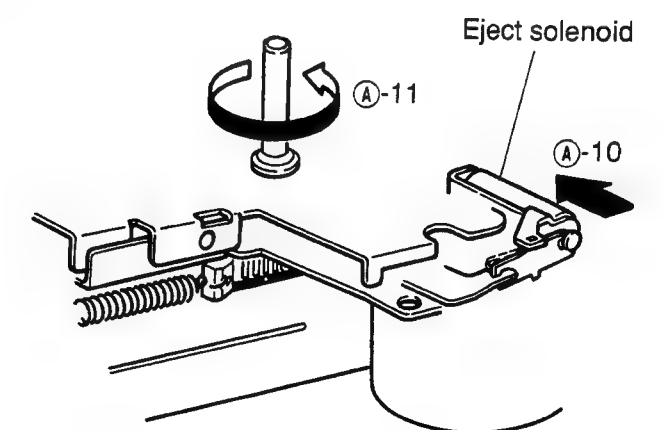


Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear

- (1) Remove M1.2 lock washer ③ as shown in Figure 6.
- (2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.
- (3) Apply the molykote E paste to the section ⑧-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid

- (1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.
- (2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to $350^{\circ} \pm 10^{\circ}$ and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

c. Replacement of the photo sensor

- (1) Remove four solders ⑤ as shown in Figure 7.
- (2) Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.
- (3) Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked ⑧-2 as shown in Figure 7.
- (4) Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by [] in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to $350^{\circ} \pm 10^{\circ}$ and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

d. Replacement of the detector switch (Automatic metal pack-in)

- (1) Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.
- (2) Prepare the terminals of the switch of the new solder as shown in Figure 8.
- (3) After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

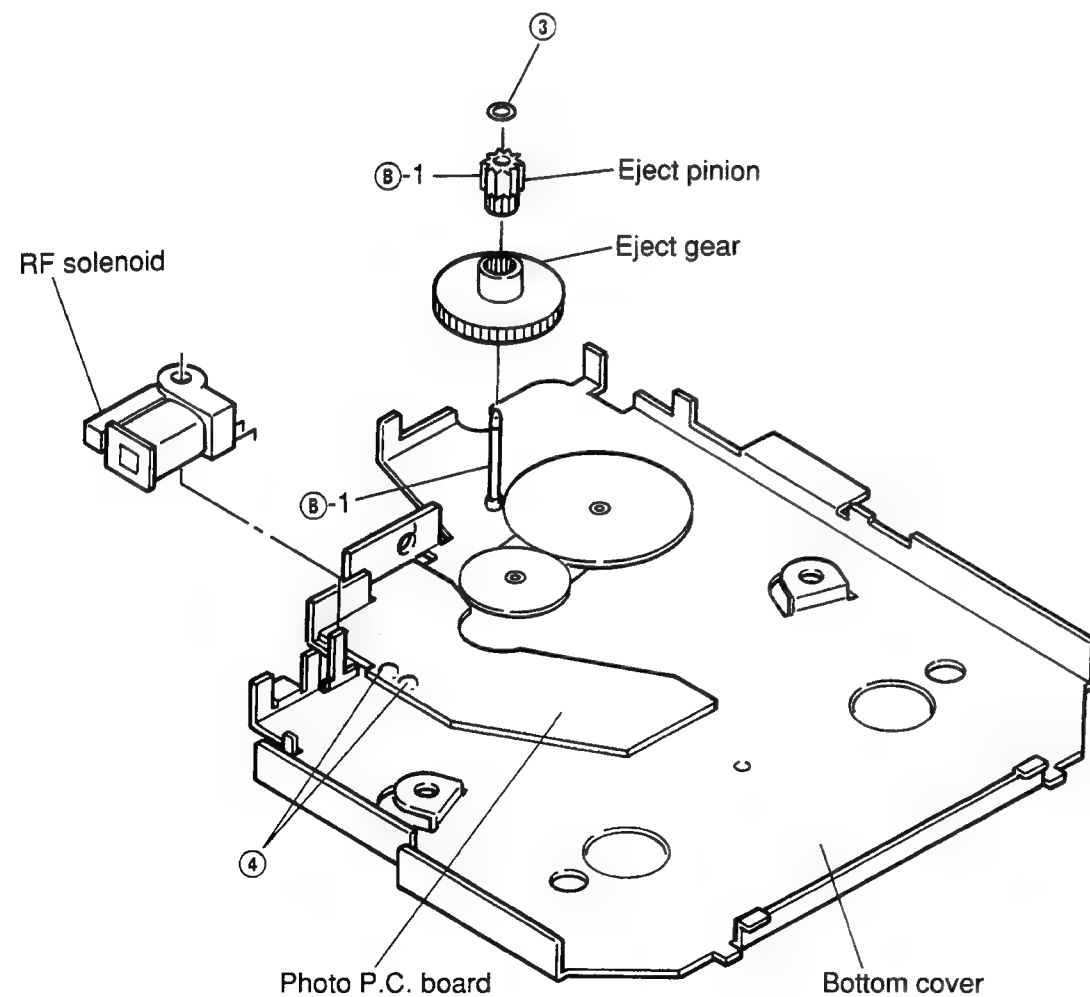


Figure 6

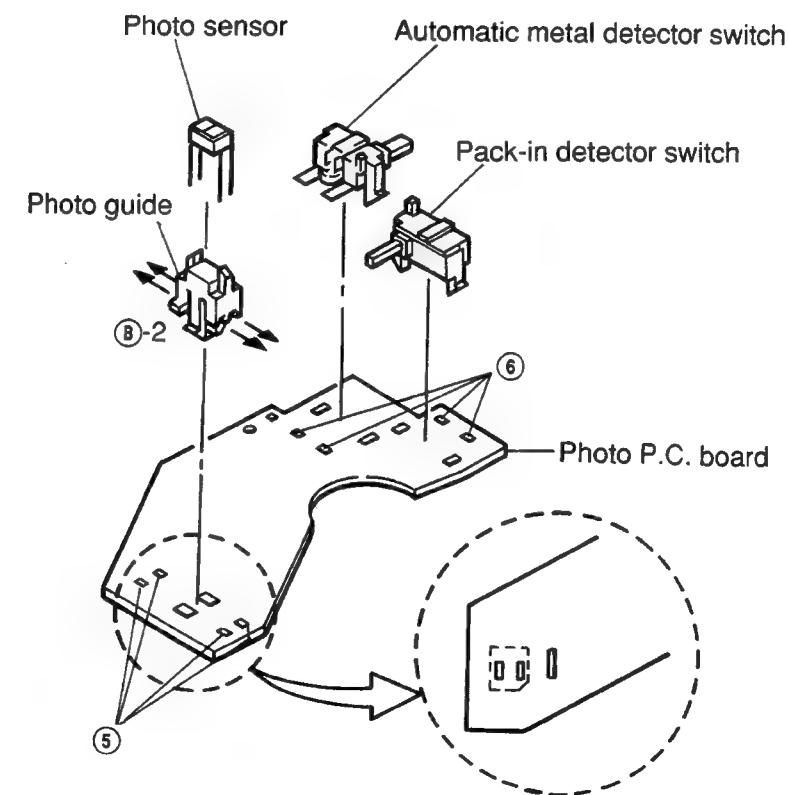


Figure 7

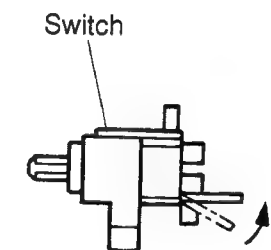


Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt

- (1) After removing the bottom cover, remove the belt.
- (2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.

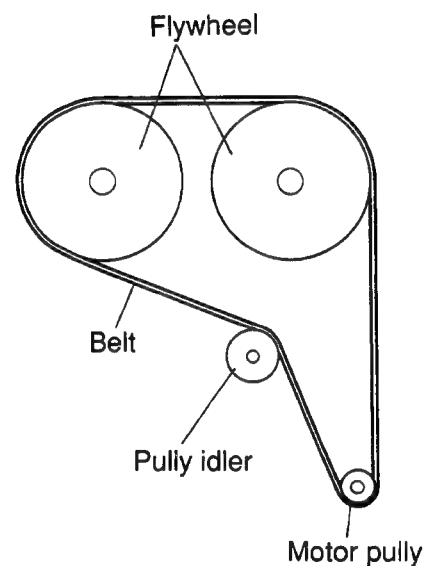


Figure 9

b. Replacement of the motor

- (1) After removing the belt, remove spring ⑦ as shown in Figure 10.
- (2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.
- (3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)
- (4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care. Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

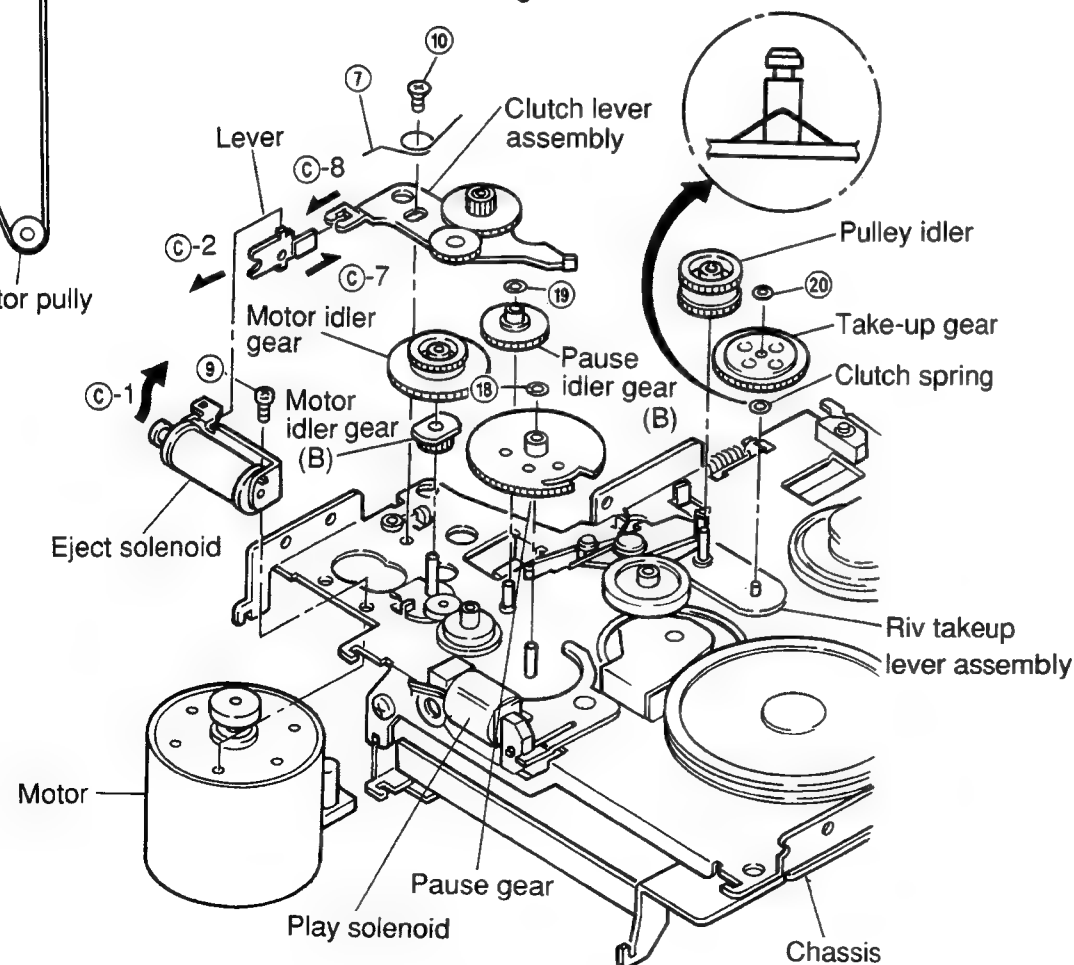


Figure 10

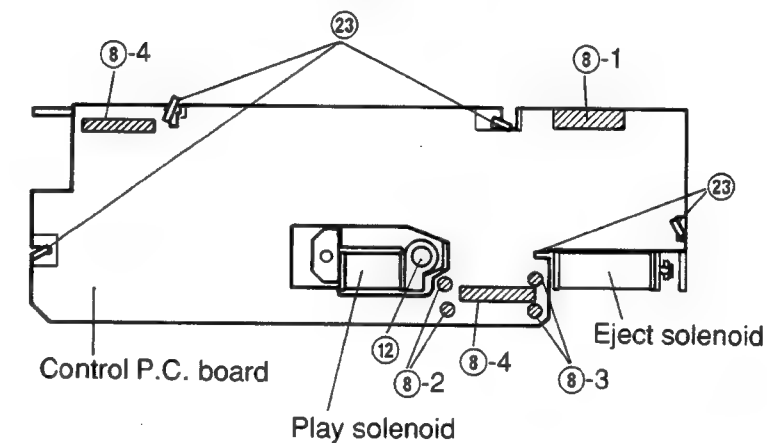
c. Replacement of the flywheels

- (1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)
- (2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

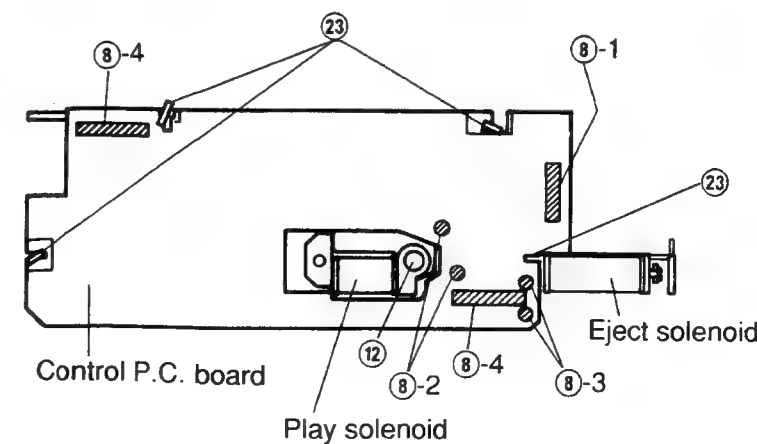
d. Replacement of the play solenoid

- (1) Remove the two solders ⑧-2 as shown in Figure 11.
- (2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.
- (3) Mount the new solenoid following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.



[For GR75E020, GR75E010, GR75E01A, GR75E01C models]



[For GR75L020, GR75L010 models]

Figure 11

e. Replacement of the eject solenoid

- (1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)
- (2) Remove screw ⑨ and remove the play solenoid as shown in Figure 10.
- (3) Align position ㉞-1 of the new solenoid with position ㉞-2 of the lever and fasten the screw as shown in Figure 10.
- (4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm. As the solder wires are not insulated, do not let them cross each other.

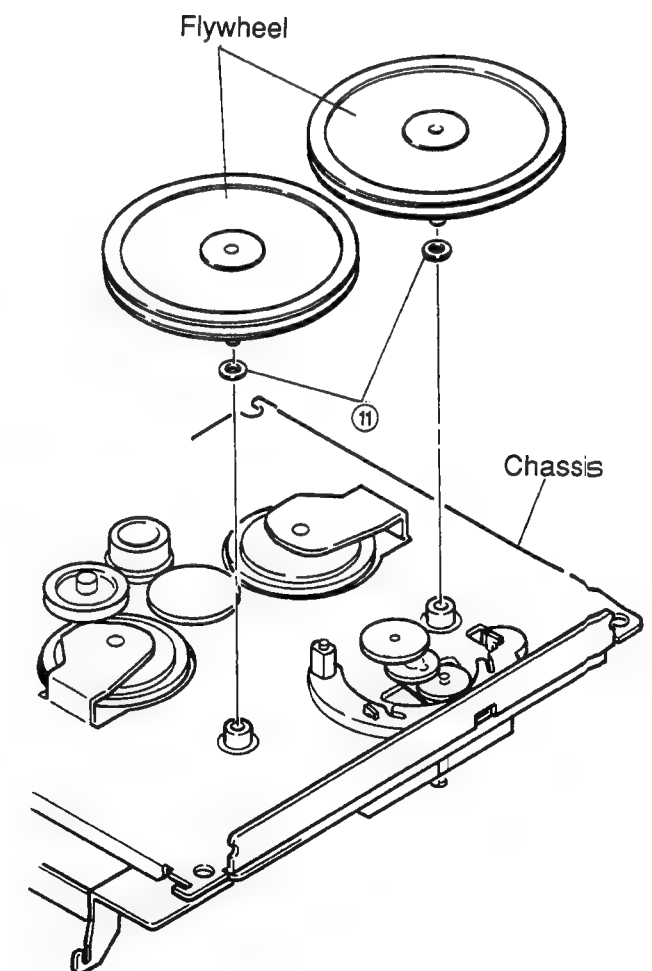


Figure 12

Suzuki

f. Replacement of gears

(f-1) Replacement of the reverse idler gear

- (1) Remove M1.2 lock washer (13), pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
- (2) Remount following the removal steps in the reverse order.

(f-2) Replacement of the sun gear

- (1) Remove M1.2 lock washer (14), pull it up from the stud of the chassis and remove the gear as shown in Figure 13.
- (2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear

- (1) Adjust the two mounting claws for the fix gear on the chassis (15) and remove the section C-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.
- (2) Insert the section C-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear

- (1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.
- (2) Remove M1.7 lock washer (16) and remove the planet gear as shown in Figure 14.
- (3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:

After mounting all parts, check if the reverse lever moves in the directions marked C-5 when the reverse gear is turned clockwise and counterclockwise.

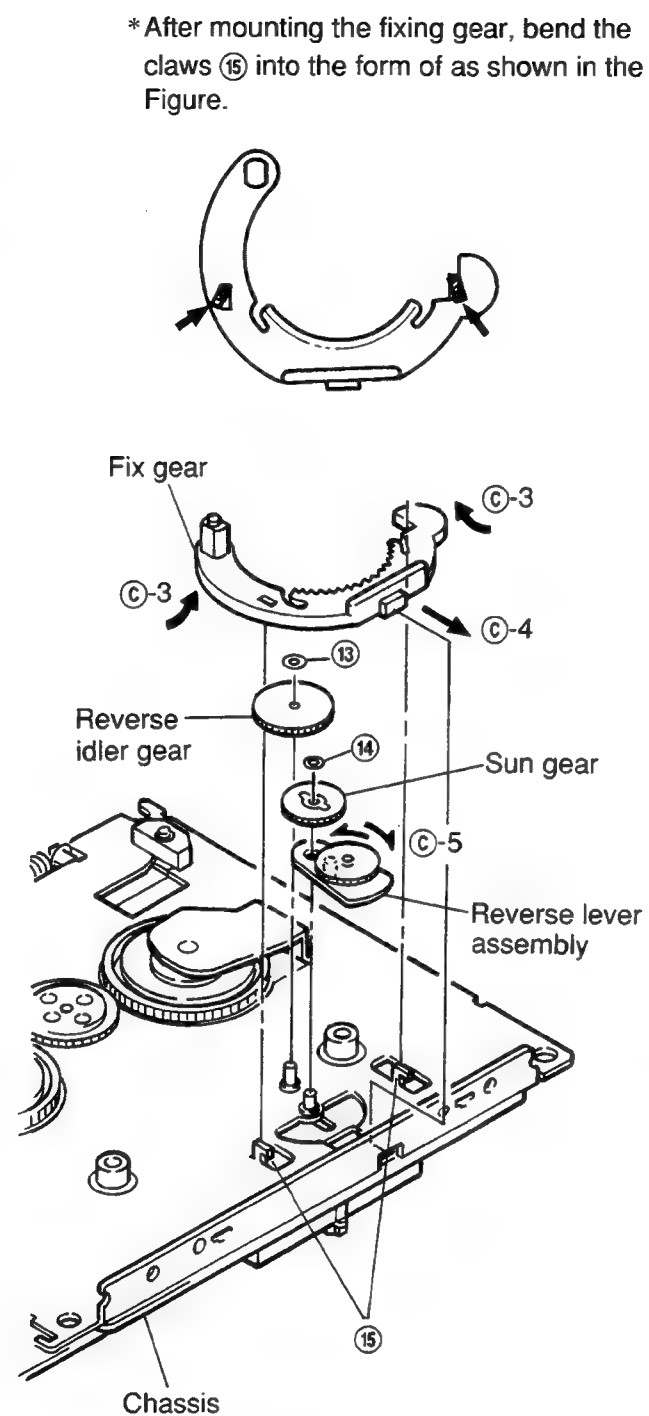


Figure 13

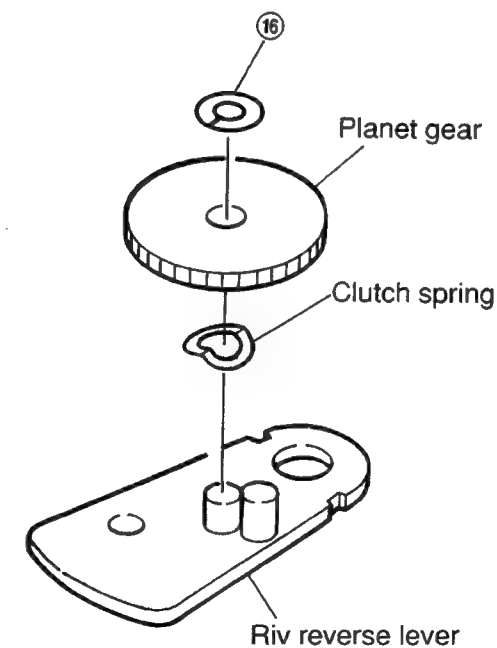
(f-5) Replacement of the clutch lever assembly and eject idler gear

- (1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.
- (2) Remove M1.2 lock washer (17) and remove the eject idler gear as shown in Figure 15.
- (3) Mount the new gears and clutch lever following the removal steps in the reverse order.

Note: When mounting the gears to the lever, apply grease (FLOIL 425A) to the position C-6 as shown in Figure 15. Align the position C-7 with the position C-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear

- (1) Remove M1.2 lock washer (18) and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.
- (2) Mount the new gear following the removal steps in the reverse order.



[Disassembly Reverse Lever Assembly]

Figure 14

(f-7) Replacement of the pause idler gear (B)

- (1) After removing the motor and the motor idler gear, remove M1.2 lock washer (19) and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.
- (2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear

- (1) After removing the belt and the pulley idler gear, remove M1.2 lock washer (20) by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10.
- (2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:

Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

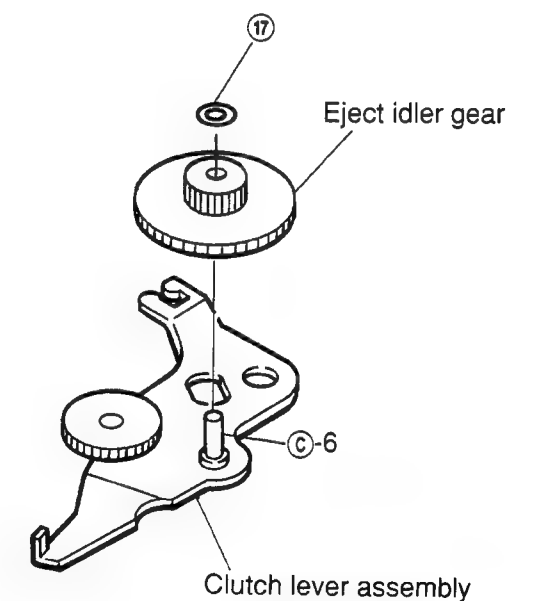


Figure 15

4. Replacement of the parts mounted on the front of the chassis

a. Replacement of the audio P.C. board

- (1) Remove two solders ②① and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.
- (2) Adjust the two claws ②② to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.
- (3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

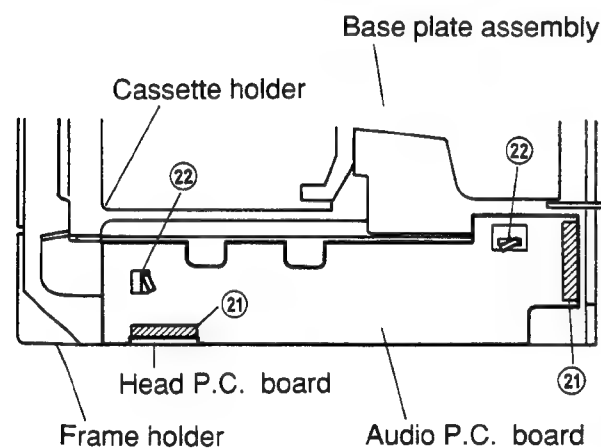


Figure 16

b. Replacement of the control P.C. board

- (1) Remove seven solders ⑧ and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.
- (2) Remove five claws ②③ and remove the P.C. board as shown in Figure 11. [For GR75E020, GR75E010, GR75E01A, GR75E01C models] Remove four claws ②③ and remove the P.C. board as shown in Figure 11. [For GR75L020, GR75L010 models]
- (3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

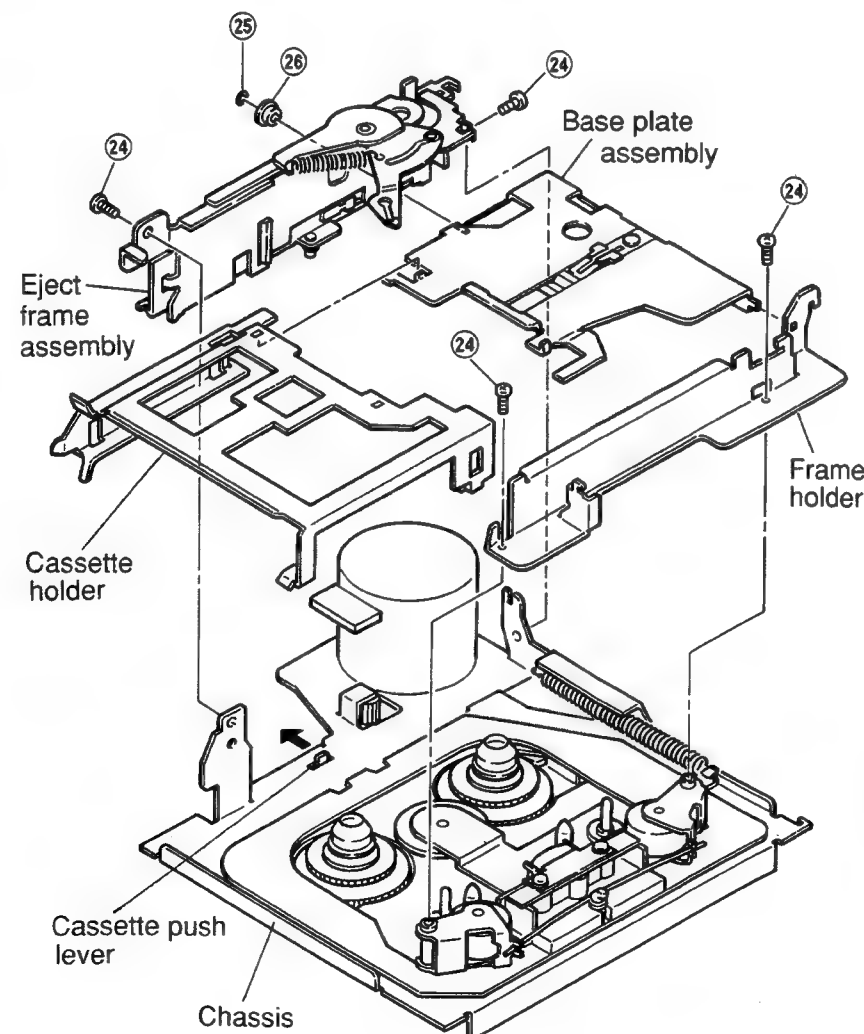


Figure 17

c. Disassembly and assembly of the cassette holder

- (1) Remove four screws ②④ and remove the eject frame assembly and the frame holder as shown in Figure 17.
- (2) Remove M1.2 lock washer ②⑤ and plate base roller ②⑥ and remove the cassette holder and the base plate assembly as shown in Figure 17.
- (3) Remount them following the removal steps in the reverse order.

Notes:

1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

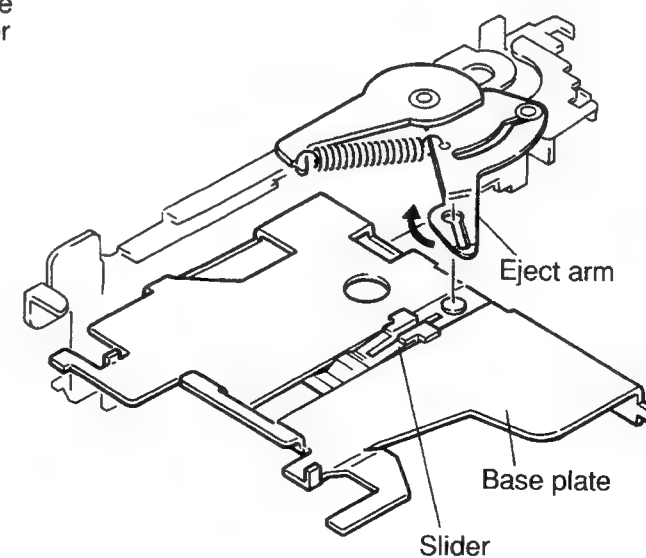


Figure 18

d. Replacement of the reels

- (1) Remove M1.7 two lock washers ②⑥ (Refer to figure 19).
- (2) Move the select lever in the direction marked ①-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.
- (3) After replacement, mount the new reels following the removal steps in the reverse order.
- (4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

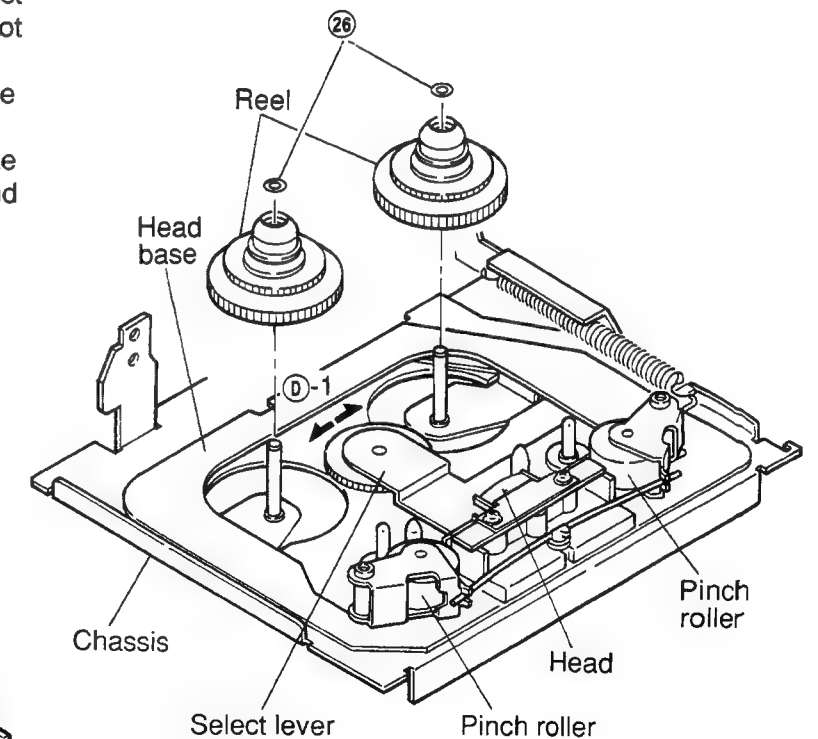


Figure 19

e. Replacement of the pinch rollers

- (1) Remove pinch roller spring ②⑦ as shown in Figure 20.
- (2) Remove M3.1 two lock washers ②⑧ and remove the pinch roller as shown in Figure 20.
- (3) Mount the pinch rollers following the removal steps in the reverse order.
Apply insulation coating to the position ②-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

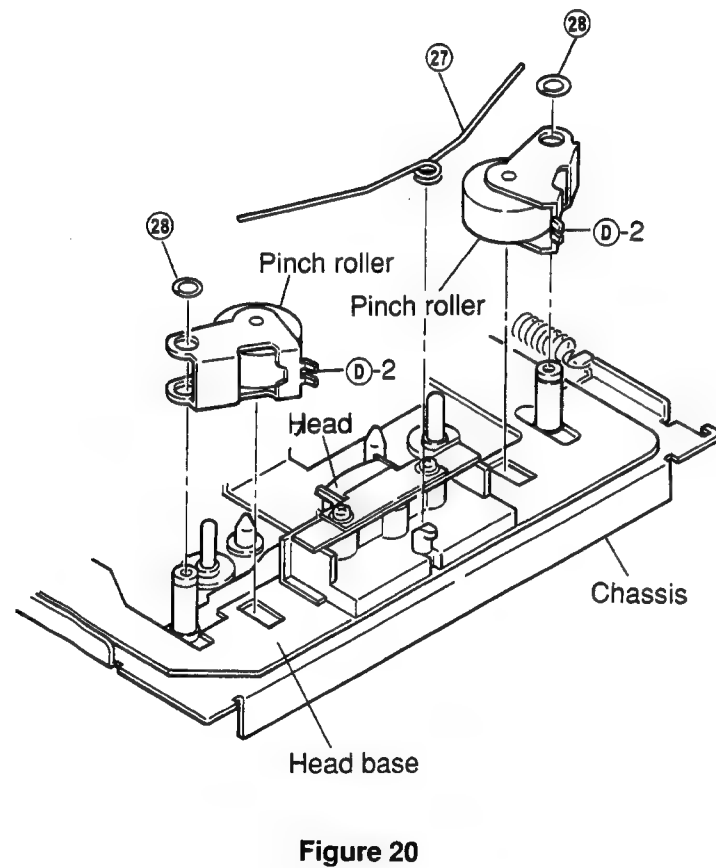


Figure 20

f. Replacement of the head

- (1) After removing the pinch roller spring, remove two screws ②⑨ as shown in Figure 21.
- (2) Remove solder ③⑩ and remove the head from the head P.C. board as shown in Figure 22.
- (3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.
2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

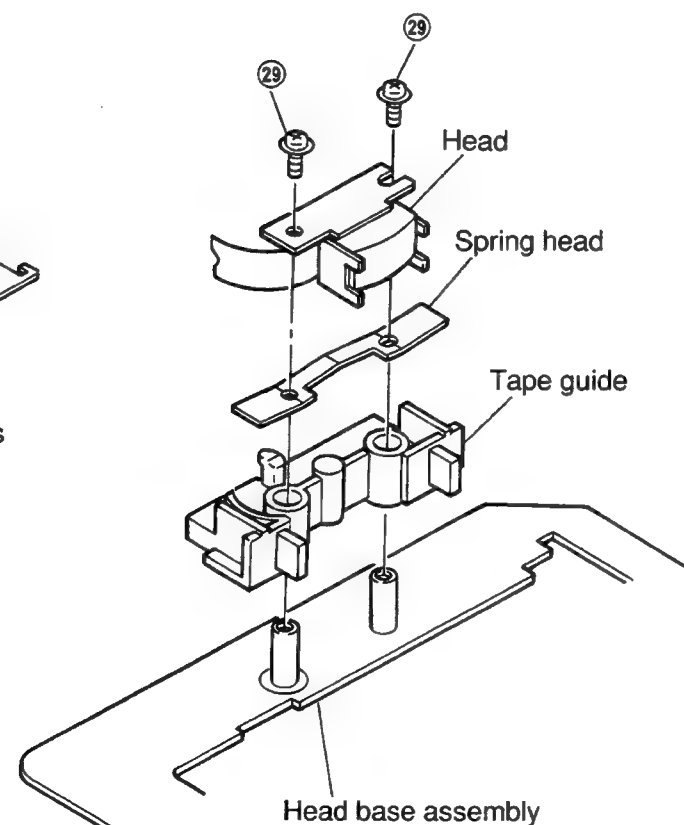


Figure 21

- (4) Adjust the height of the head as shown in Figures 23, 24 and 25.

- ① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.
- ② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm). If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

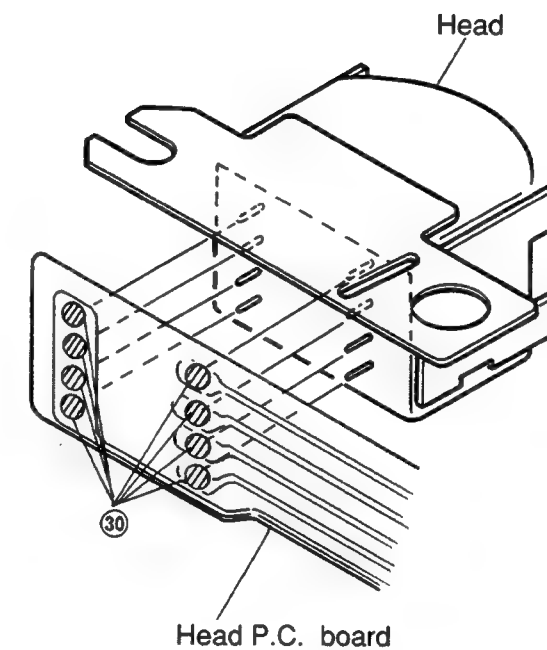


Figure 22

- (5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

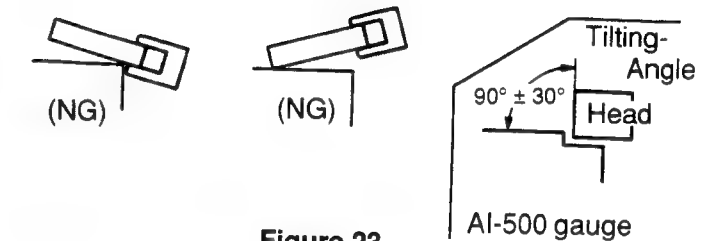


Figure 23

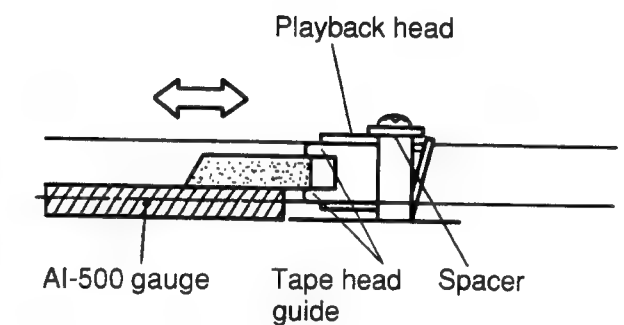
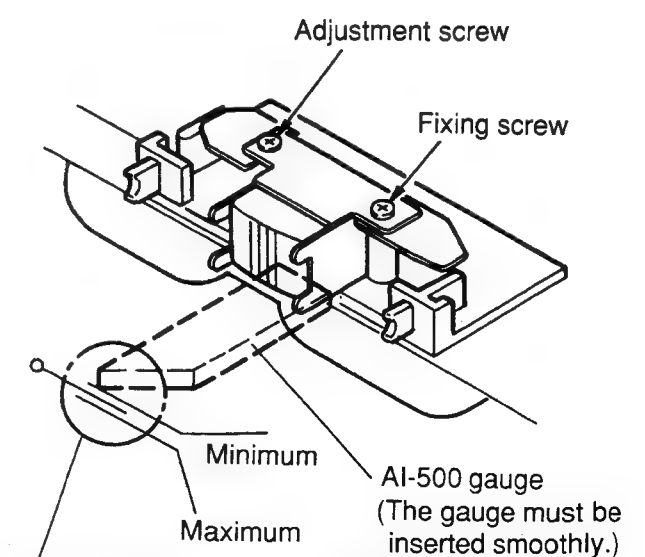


Figure 24

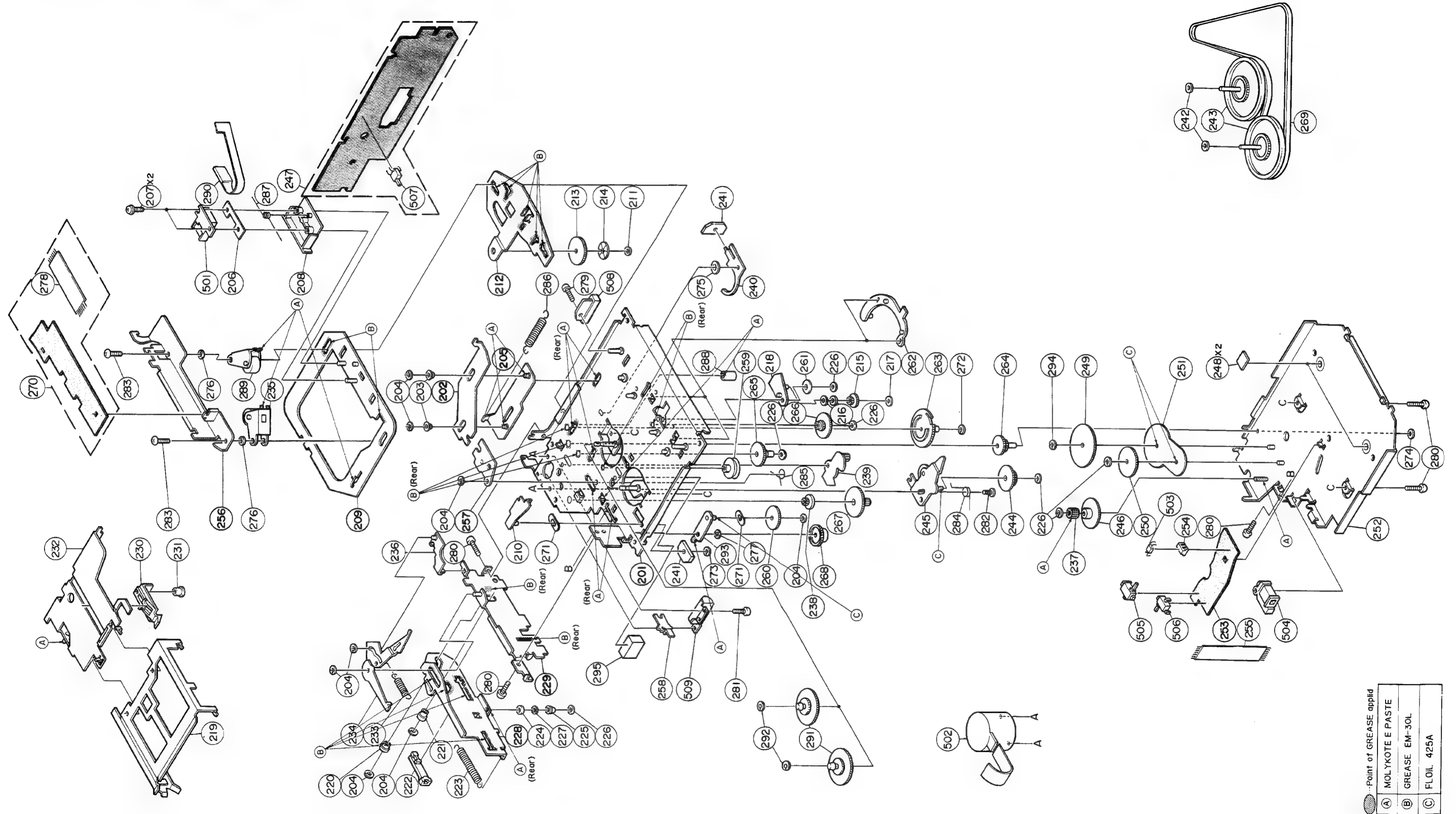


The nosepiece of the gauge must be between the minimum and maximum positions.

Figure 25

Exploded View (1/3)

● For GR75E010/01A/01C/020 Models



| Point of GREASE appld | |
|-----------------------|------------------|
| (A) | MOLYKOTE E PASTE |
| (B) | GREASE EM-30L |
| (C) | FLOIL 425A |

Cassette Deck Assembly Parts List (1/3)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 203 | 3-C | 43A11072W01 | Roller, Sub Head |
| 204 | | 04B41345P01 | Washer, Lock(M1.2) |
| 206 | 2-B | 41A10095W01 | Spring, Head |
| 207 | 2-B | 03S40019G03 | Screw, F-Locks(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape, Guide |
| 210 | 4-C | 01A10206W01 | Assy., Riv Lever R/F Sol |
| 211 | 2-D | 04B41345P29 | Washer, Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear, Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A10142W01 | Gear, Planet |
| 216 | 3-E | 41A10097W02 | Spring, Clutch |
| 217 | 3-E | 04B41345P35 | Washer, Lock(M1.7) |
| 218 | 3-E | 01A21853W01 | Assy., Riv Lever Reverse |
| 219 | 4-B | 07B10074W01 | Holder, Cassette |
| 220 | 5-B | 43A12583W01 | Roller, Eject |
| 221 | 5-C | 43A63281F01 | Roller, Plate Base |
| 222 | 5-C | 44A82206F01 | Rack |
| 223 | 5-C | 41B10386W03 | Spring, GR(Rack) |
| 224 | 4-C | 43A10121W01 | Roller, Eject A |
| 225 | 4-D | 43A10360W01 | Roller, Eject B |
| 226 | | 04B41345P11 | Washer, Lock(M1.2) |
| 227 | 4-D | 43A12377W01 | Roller, Eject C |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft, Slider |
| 232 | 4-A | 01A10212W01 | Assy., Riv Plate Base |
| 233 | 4-C | 41B10386W01 | Spring, Eject Arm |
| 234 | 4-B | 01A10148W01 | Assy., Riv Eject Arm A |
| 235 | 3-B | 01B10381W02 | Assy., Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever Pack In SW |
| 237 | 4-F | 44A12975W01 | Pinion, Eject |
| 238 | 4-E | 44A13617W01 | Gear, Motor Idler(B) |
| 239 | 3-E | 01A10201W02 | Assy., Riv Lever Pause |
| 240 | 2-D | 45A10092W01 | Lever, Play |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer Polyslider (M2.1) |
| 243 | 1-G | 01A10368W01 | Assy., Flywheel |
| 244 | 3-F | 44A10141W01 | Gear, Eject Idler |
| 245 | 3-E | 01A10205W01 | Assy., Riv Lever Clutch A |
| 246 | 3-F | 44A10145W01 | Gear, Eject |
| 247 | 2-B | 01V11500W18 | Assy., GR Control P.C. Board |

Notes : ● : For GR75E020 model only ■ : For GR75E010 model only
▲ : For GR75E01A model only ○ : For GR75E01C model only

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 248 | 3-G | 43A90918F01 | Spacer, Polyslider |
| 249 | 3-F | 44A11063W01 | Gear, Bottom A |
| 250 | 3-F | 44A11064W01 | Gear, Bottom B |
| 251 | 3-G | 34A11122W02 | Washer, GR |
| 252 | 3-H | 01A10210W02 | Assy., Riv. Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide, Photo |
| 255 | 4-G | 30T15126W01 | Wire, PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever, Eject Sol |
| 259 | 3-D | 49A10131W01 | Pulley, Idler |
| 260 | 4-E | 44A10133W01 | Gear, Take Up |
| 261 | 3-E | 44A10134W01 | Gear, Sun |
| 262 | 3-E | 44B10135W01 | Gear, Fix |
| 263 | 3-E | 44B10136W01 | Gear, Pause |
| 264 | 3-F | 44A10137W01 | Gear, Pause Idler A |
| 265 | 3-D | 44A10379W01 | Gear, Pause Idler B |
| 266 | 3-E | 44A10138W01 | Gear, Reverse Idler |
| 267 | 3-E | 44A10139W01 | Gear, Motor Idler |
| 268 | 4-E | 44A11062W01 | Gear, Reel Idler |
| 269 | 1-G | 42A10380W01 | Belt, GR |
| ● 270 | 3-A | 01V14700W68 | Assy., GR Audio P.C. Board |
| ■ 270 | 3-A | 01V11500W19 | Assy., GR Audio P.C. Board |
| ▲ 270 | 3-A | 01V11500W19 | Assy., GR Audio P.C. Board |
| ○ 270 | 3-A | 01V11500W19 | Assy., GR Audio P.C. Board |
| 271 | 4-D | 41A10097W02 | Spring, Clutch |
| 272 | 3-F | 04B41345P15 | Washer, Lock(M1.2) |
| 273 | 4-D | 04B41345P02 | Washer, Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer, Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer, Lock(M3.1) |
| 276 | 3-B | 04B41345P32 | Washer, Lock(M3.1) |
| 277 | 4-E | 04B41345P06 | Washer, Lock(M2.1) |
| 278 | 2-A | 30T15126W02 | Wire, PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw, Pan(M2x6) |
| 280 | | 03S44205G30 | Screw, Pan(M2.6x4) |
| 281 | 4-D | 03S72235F38 | Screw, Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw, Eject Clutch (M2x2.3) |
| 283 | | 03S43997P64 | Screw, Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring, Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring, Cas Push |
| 286 | 2-C | 41B10386W02 | Spring, Sub Head |
| 287 | 2-B | 41A10387W01 | Spring, Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller, Pause |

Others : Common

| Symbol No. | IN-dex | Part No. | Description |
|---------------|--------|-------------|---------------------------|
| 289 | 3-B | 01B10381W01 | Assy., Pinch Roller |
| 290 | 2-B | 84T10367W01 | Head P.C. Board |
| ● 291 | 4-E | 01T15164W01 | Assy., Reel |
| ■ 291 | 4-E | 01T15164W01 | Assy., Reel |
| ▲ 291 | 4-E | 01T15164W02 | Assy., Reel |
| ○ 291 | 4-E | 01T15164W01 | Assy., Reel |
| 292 | 4-E | 04B41345P12 | Washer, Lock(M1.7) |
| ● 293 | 4-D | 01A11078W01 | Assy., Riv Lever Take Up |
| ■ 293 | 4-D | 01A11078W01 | Assy., Riv Lever Take Up |
| ▲ 293 | 4-D | 01A11078W01 | Assy., Riv Lever Take Up |
| ○ 293 | 4-D | 01A11078W01 | Assy., Riv Lever Take Up |
| 294 | 3-F | 04B41345P34 | Washer, Lock(M1.2) |
| 295 | 4-D | 75S12196W88 | Rubber, Pad |
| Miscellaneous | | | |
| ● 501 | 2-B | 88T15971W01 | Head |
| ■ 501 | 2-B | 88T10373W01 | Head |
| ▲ 501 | 2-B | 88T10373W01 | Head |
| ○ 501 | 2-B | 88T10373W01 | Head |
| 502 | 4-E | 01V11500W64 | Assy., Motor |
| 503 | 3-G | 51T15144W01 | Sensor, Photo |
| 504 | 4-G | 01T10371W01 | R/F Sol. Assy. |
| 505 | 4-F | 40T15382W01 | SW., Detector (Pack Down) |
| 506 | 4-G | 40T15382W01 | SW., Detector(Metal) |
| 507 | 2-C | 40T15222W01 | SW., Detector (Pack In) |
| 508 | 2-D | 01T15249W01 | Assy., Play Solenoid |
| 509 | 4-D | 01T10369W02 | Assy., Eject Solenoid |

Notes : ● : For GR75E020 model only ■ : For GR75E010 model only
▲ : For GR75E01A model only ○ : For GR75E01C model only

Others : Common

Exploded View (2/3)

● For GR75L010/020 Models

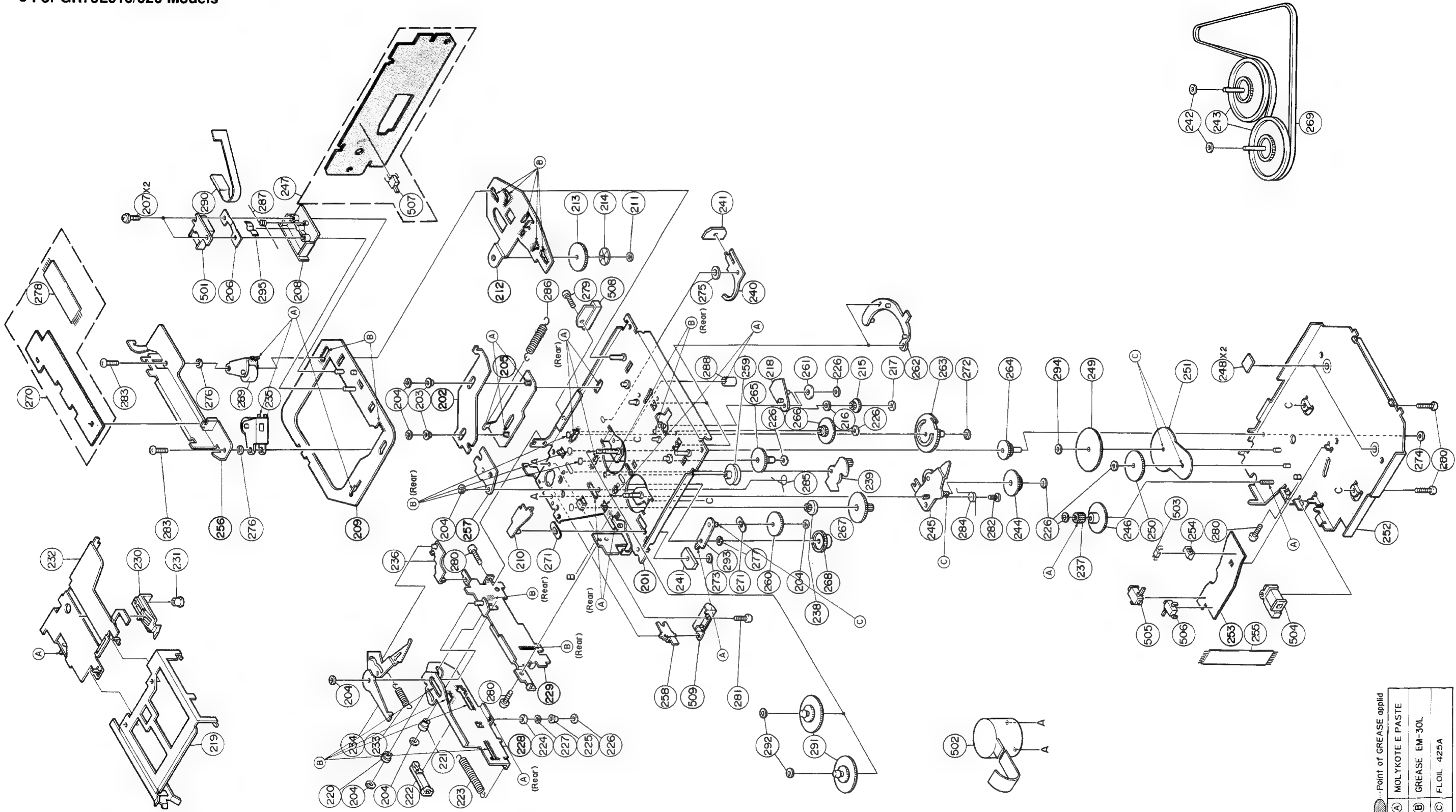
1

2

3

4

5



| | |
|------------------------|------------------|
| Point of GREASE applid | |
| (A) | MOLYKOTE E PASTE |
| (B) | GREASE EM-30L |
| (C) | FLOIL 425A |

Cassette Deck Assembly Parts List (2/3)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 203 | 3-C | 43A11072W01 | Roll. Sub Head |
| 204 | | 04B41345P01 | Washer. Lock(M1.2) |
| 206 | 2-B | 41A21671W01 | Spring. Head |
| 207 | 2-B | 03S40019G03 | Screw. F-Locks(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape. Guide |
| 210 | 4-C | 01A10206W01 | Assy.. Riv Lever R/F Sol. |
| 211 | 2-D | 04B41345P29 | Washer. Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear. Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A10142W01 | Gear. Planet |
| 216 | 3-E | 41A10097W02 | Spring. Clutch |
| 217 | 3-E | 04B41345P31 | Washer. Lock(M1.7) |
| 218 | 3-E | 01A21853W01 | Assy.. Riv Lever Reverse |
| 219 | 4-B | 07B10074W01 | Holder. Cassette |
| 220 | 5-B | 43A12583W01 | Roller. Eject |
| 221 | 5-C | 43A22153W01 | Roller. Plate Base |
| 222 | 5-C | 44A82206F01 | Rack |
| 223 | 5-C | 41B10386W03 | Spring. GR(Rack) |
| 224 | 4-C | 43A10121W01 | Roller. Eject(A) |
| 225 | 4-D | 43A10360W01 | Roller. Eject(B) |
| 226 | | 04B41345P11 | Washer. Lock(M1.2) |
| 227 | 4-D | 43A12377W01 | Roller. Eject(C) |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft. Slider |
| 232 | 4-A | 01A10212W01 | Assy.. Riv Plate Base |
| 233 | 4-C | 41B10386W01 | Spring. Eject Arm |
| 234 | 4-B | 01A21754W01 | Assy.. Riv Eject Arm(A) |
| 235 | 3-B | 01B10381W02 | Assy.. Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever. Pack In SW. |
| 237 | 4-F | 44A20314W01 | Pinion. Eject |
| 238 | 4-E | 44A13617W01 | Gear. Motor Idler(B) |
| 239 | 3-E | 01A10201W02 | Assy.. Riv Lever Pause |
| 240 | 2-D | 45A10092W01 | Lever. Play |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer. Polyslider (M2.1) |
| 243 | 1-G | 01A10368W01 | Assy.. Flywheel |
| 244 | 3-F | 44A10141W02 | Gear. Eject Idler |
| 245 | 3-E | 01A10205W02 | Assy.. Riv Lever Clutch(A) |
| 246 | 3-F | 44A10145W01 | Gear. Eject |
| 247 | 2-B | 01V23700W03 | Assy.. GR Control P.C. Board |

Notes : ★; For GR75L010 model only ◆; For GR75L020 model only
Others : Common

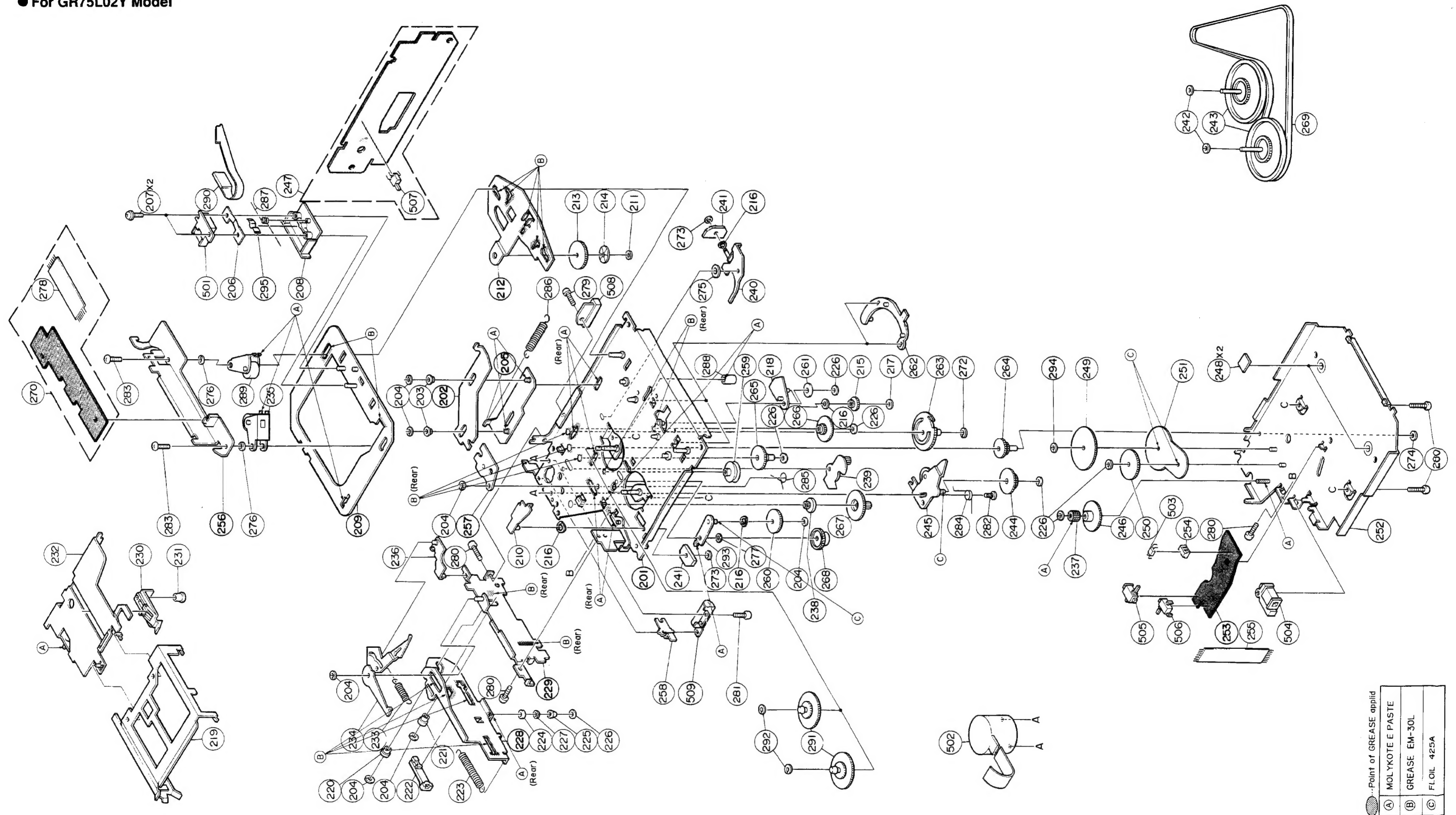
| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 248 | 3-G | 43A90918F01 | Spacer. Polyslider |
| 249 | 3-F | 44A11063W01 | Gear. Bottom(A) |
| 250 | 3-F | 44A11064W01 | Gear. Bottom(B) |
| 251 | 3-G | 34A11122W02 | Washer. GR |
| 252 | 3-H | 01A10210W02 | Assy.. Riv. Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide. Photo |
| 255 | 4-G | 30T15126W01 | Wire. PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever. Eject Sol. |
| 259 | 3-D | 49A10131W01 | Pulley. Idler |
| 260 | 4-E | 44A10133W01 | Gear. Take Up |
| 261 | 3-E | 44A10134W01 | Gear. Sun |
| 262 | 3-E | 44B10135W01 | Gear. Fix |
| 263 | 3-E | 44B21670W01 | Gear. Pause |
| 264 | 3-F | 44A10137W01 | Gear. Pause Idler(A) |
| 265 | 3-D | 44A10379W01 | Gear. Pause Idler(B) |
| 266 | 3-E | 44A10138W01 | Gear. Reverse Idler |
| 267 | 3-E | 44A10139W01 | Gear. Motor Idler |
| 268 | 4-E | 44A11062W01 | Gear. Reel Idler |
| 269 | 1-G | 42A10380W01 | Belt. GR |
| ★ 270 | 3-A | 01V11500W19 | Assy.. GR Audio P.C. Board |
| ◆ 270 | 3-A | 01V14700W68 | Assy.. GR Audio P.C. Board |
| 271 | | 41A10097W02 | Spring. Clutch |
| 272 | 3-F | 04B41345P15 | Washer. Lock(M1.2) |
| 273 | 4-D | 04B41345P02 | Washer. Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer. Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer. Lock(M3.1) |
| 276 | 3-B | 04B41345P32 | Washer. Lock(M3.1) |
| 277 | 4-E | 04B41345P06 | Washer. Lock(M2.1) |
| 278 | 2-A | 30T15126W02 | Wire. PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw. Pan(M2x6) |
| 280 | | 03S44205G30 | Screw. Pan(M2.6x4) |
| 281 | 4-D | 03S72235F38 | Screw. Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw. Eject Clutch (M2x2.3) |
| 283 | | 03S43997P64 | Screw. Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring. Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring. Cas. Push |
| 286 | 2-C | 41B10386W02 | Spring. Sub Head |
| 287 | 2-B | 41A10387W01 | Spring. Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller. Pause |
| 289 | 3-B | 01B10381W01 | Assy.. Pinch Roller |
| 290 | 2-B | 84T10367W01 | Head P.C. Board |

| Symbol No. | IN-dex | Part No. | Description |
|---------------|--------|-------------|---------------------------|
| 291 | 4-E | 01T15164W03 | Assy.. Reel |
| 292 | 4-E | 04B41345P12 | Washer. Lock(M1.7) |
| 293 | 4-D | 01A11078W01 | Assy.. Riv Lever Take Up |
| 294 | 3-F | 04B41345P34 | Washer. Lock(M1.2) |
| 295 | 2-B | 26A20537W01 | Shield. Plate |
| Miscellaneous | | | |
| ★ 501 | 2-B | 88T10373W01 | Head |
| ◆ 501 | 2-B | 88T15971W01 | Head |
| 502 | 4-E | 01V23900W60 | Assy.. Motor |
| 503 | 3-G | 51T15144W01 | Sensor. Photo |
| 504 | 4-G | 01T10371W01 | R/F Sol. Assy |
| 505 | 4-F | 40T15382W01 | SW.. Detector (Pack Down) |
| 506 | 4-G | 40T15382W01 | SW.. Detector (Metal) |
| 507 | 2-C | 40T15222W01 | SW.. Detector (Pack In) |
| 508 | 2-D | 01T15249W01 | Assy.. Play Solenoid |
| 509 | 4-D | 01T10369W02 | Assy.. Eject Solenoid |

Notes : ★; For GR75L010 model only ◆; For GR75L020 model only
Others : Common

Exploded View (GR-Y Series) (3/3)

● For GR75L02Y Model



| | |
|------------------------|------------------|
| Point of GREASE applid | |
| (A) | MOLYKOTE E PASTE |
| (B) | GREASE EM-30L |
| (C) | FLOIL 425A |

Cassette Deck Assembly Parts List (GR-Y Series) (3/3)

Note: The parts without parts list are not supplied.

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 203 | 3-C | 43A11072W01 | Roll. Sub Head |
| 204 | | 04B41345P01 | Washer. Lock(M1.2) |
| 206 | 2-B | 41A21671W01 | Spring. Head |
| 207 | 2-B | 03S40019G03 | Screw. F-Locks(M2x4) |
| 208 | 2-B | 43B12545W01 | Tape. Guide |
| 210 | 4-C | 01A10206W01 | Assy.. Riv Lever R/F Sol. |
| 211 | 2-D | 04B41345P38 | Washer. Lock(M2.6) |
| 213 | 2-D | 44A10295W01 | Gear. Sensor |
| 214 | 2-D | 14A10681W01 | Reflector |
| 215 | 3-E | 44A10142W01 | Gear. Planet |
| 216 | | 41A10097W02 | Spring. Clutch |
| 217 | 3-E | 04B41345P31 | Washer. Lock(M1.7) |
| 218 | 3-E | 01A21853W01 | Assy.. Riv Lever Reverse |
| 219 | 4-B | 07B10074W01 | Holder. Cassette |
| 220 | 5-B | 43A12583W01 | Roller. Eject |
| 221 | 5-C | 43A63281F01 | Roller. Plate Base |
| 222 | 5-C | 44A82206F01 | Rack |
| 223 | 5-C | 41B10386W03 | Spring. GR(Rack) |
| 224 | 4-C | 43A10121W01 | Roller. Eject(A) |
| 225 | 4-D | 43A10360W01 | Roller. Eject(B) |
| 226 | | 04B41345P11 | Washer. Lock(M1.2) |
| 227 | 4-D | 43A12377W01 | Roller. Eject(C) |
| 230 | 4-A | 45B10376W01 | Slider |
| 231 | 4-B | 47A63278F01 | Shaft. Slider |
| 232 | 4-A | 01A10212W01 | Assy.. Riv Plate Base |
| 233 | 4-C | 41B10386W01 | Spring. Eject Arm |
| 234 | 4-B | 01A21754W01 | Assy.. Riv Eject Arm(A) |
| 235 | 3-B | 01B10381W02 | Assy.. Pinch Roller |
| 236 | 4-C | 45A10087W01 | Lever. Pack In SW. |
| 237 | 4-F | 44A20314W01 | Pinion. Eject |
| 238 | 4-E | 44A13617W01 | Gear. Motor Idler(B) |
| 239 | 3-E | 01A10201W02 | Assy.. Riv Lever Pause |
| 240 | 2-D | 01A30879W01 | Assy.. Riv. Play Sol. |
| 241 | | 76T10374W01 | Chip |
| 242 | 1-G | 04S40075G05 | Washer. Polyslider (M2.1) |
| 243 | 1-G | 01A10368W01 | Assy.. Flywheel |
| 244 | 3-F | 44A10141W01 | Gear. Eject Idler |
| 245 | 3-E | 01A10205W02 | Assy.. Riv Lever Clutch(A) |
| 246 | 3-F | 44A10145W01 | Gear. Eject |
| 247 | 2-B | 01V23700W04 | Assy.. GR Control P.C. Board |

| Symbol No. | IN-dex | Part No. | Description |
|------------|--------|-------------|------------------------------|
| 248 | 3-G | 43A90918F01 | Spacer. Polyslider |
| 249 | 3-F | 44A11063W01 | Gear. Bottom(A) |
| 250 | 3-F | 44A11064W01 | Gear. Bottom(B) |
| 251 | 3-G | 34A11122W02 | Washer. GR |
| 252 | 3-H | 01A10210W02 | Assy.. Riv. Cover Bottom |
| 254 | 3-G | 15B11065W01 | Guide. Photo |
| 255 | 4-G | 30T15126W01 | Wire. PC Sensor(7P) |
| 258 | 4-D | 45A10101W01 | Lever. Eject Sol. |
| 259 | 3-D | 49A10131W01 | Pulley. Idler |
| 260 | 4-E | 44A10133W01 | Gear. Take Up |
| 261 | 3-E | 44A10134W01 | Gear. Sun |
| 262 | 3-E | 44B10135W01 | Gear. Fix |
| 263 | 3-E | 44B21670W01 | Gear. Pause |
| 264 | 3-F | 44A10137W01 | Gear. Pause Idler(A) |
| 265 | 3-D | 44A10379W01 | Gear. Pause Idler(B) |
| 266 | 3-E | 44A10138W01 | Gear. Reverse Idler |
| 267 | 3-E | 44A10139W01 | Gear. Motor Idler |
| 268 | 4-E | 44A11062W01 | Gear. Reel Idler |
| 269 | 1-G | 42A10380W01 | Belt. GR |
| 270 | 3-A | 01V33300W03 | Assy.. GR Audio P.C. Board |
| 272 | 3-F | 04B41345P15 | Washer. Lock(M1.2) |
| 273 | | 04B41345P02 | Washer. Lock(M1.7) |
| 274 | 3-H | 04B41345P17 | Washer. Lock(M1) |
| 275 | 2-D | 04B41345P30 | Washer. Lock(M3.1) |
| 276 | 3-B | 04B41345P32 | Washer. Lock(M3.1) |
| 277 | 4-E | 04B41345P37 | Washer. Lock(M2.1) |
| 278 | 2-A | 30T15126W02 | Wire. PC Joint 7P |
| 279 | 2-D | 03S44205G78 | Screw. Pan(M2x6) |
| 280 | | 03S44205G30 | Screw. Pan(M2.6x4) |
| 281 | 4-D | 03S72235F38 | Screw. Pan(M2x3.3) |
| 282 | 3-F | 03A12132W02 | Screw. Eject Clutch (M2x2.3) |
| 283 | | 03S43997P64 | Screw. Pan(M1.7x3) |
| 284 | 3-F | 41A10384W01 | Spring. Eject Clutch |
| 285 | 3-E | 41A10385W01 | Spring. Cas. Push |
| 286 | 2-C | 41B10386W02 | Spring. Sub Head |
| 287 | 2-B | 41A10387W01 | Spring. Pinch Roller |
| 288 | 3-D | 43A12719W01 | Roller. Pause |
| 289 | 3-B | 01B10381W01 | Assy.. Pinch Roller |
| 290 | 2-B | 84T35271W01 | Head P.C. Board |

| Symbol No. | IN-dex | Part No. | Description |
|----------------------|--------|-------------|-----------------------------|
| 291 | 4-E | 01T15164W03 | Assy.. Reel |
| 292 | 4-E | 04B41345P12 | Washer. Lock(M1.7) |
| 293 | 4-D | 01A30161W01 | Assy.. Riv Lever Take Up |
| 294 | 3-F | 04B41345P34 | Washer. Lock(M1.2) |
| 295 | 2-B | 26A20537W01 | Shield. Plate |
| Miscellaneous | | | |
| 501 | 2-B | 88T15971W01 | Head |
| 502 | 4-E | 01V23900W60 | Assy.. Motor |
| 503 | 3-G | 51T15144W01 | Sensor. Photo |
| 504 | 4-G | 01T10371W01 | R/F Sol. Assy |
| 505 | 4-F | 40T15382W01 | SW.. Detector (Pack Down) |
| 506 | 4-G | 40T15382W01 | SW.. Detector (Metal) |
| 507 | 2-C | 40T15222W01 | SW.. Detector (Pack In) |
| 508 | 2-D | 01T15249W01 | Assy.. Play Solenoid |
| 509 | 4-D | 01T10369W02 | Assy.. Eject Solenoid |